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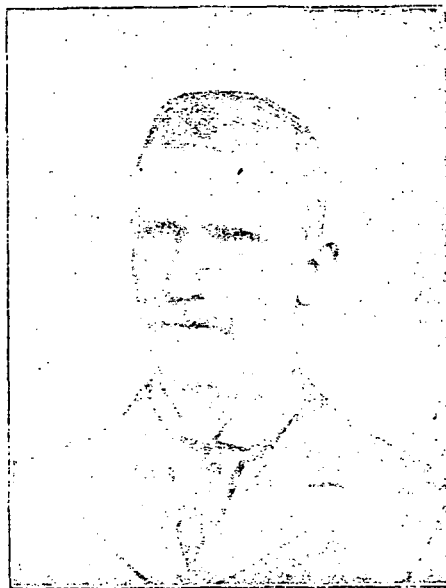
LOCATING FAULTS IN GENERATORS.

By L. S. Brainerd.

It is not an unusual occurrence for some fault to develop in a dynamo just as it is being started. If there is an extra machine which can be called into service in a case of this kind, the faulty one may be examined at leisure and thoroughly tested and repaired, but this is often not the case, and, in any event, it is, to say the least, aggravating to have the machine fail at the last moment without any apparent cause. In shunt machines, which are universally used for incandescent lighting, there are numerous causes for these failures, a few of which we will now consider.

Perhaps the most common, as well as the most perplexing, of these failures is for the generator to refuse absolutely to build up, or generate, although it was running all right just before being shut down. In a case of this kind first examine all the connections very carefully and tighten any which may appear doubtful. Should this fail to remedy the trouble, look for a short circuit in the line, the existence of which may be proved in the following manner: Open the main switch and run the dynamo up to speed. If the voltage comes up as usual, the machine is all right and the trouble is in the line. If there is reason to believe that the short circuit is of such a nature that it can easily be burned out, carefully close the main switch, first making sure that the main fuses are not too heavy, but should the voltage drop and the belt begin to slip, open the switch at once. This plan should not be resorted to except in cases where there is not time to look up the trouble, and great care must always be exercised, as the building may be set on fire, or serious damage done to the machine. Should the line prove to be all right, the trouble may be in a poor contact of the brushes, as sometimes while a machine is running and the parts are warm a film of grease forms on the brushes, which, when cold, solidifies all over the surface. When we remember that the voltage generated by the resid-

ual magnetism rarely exceeds two or three volts, it will easily be seen how this film of grease may prevent the machine from building up. If the shunt winding of the fields is open, of course, the machine will be dead. Never conclude that the shunt of a large generator is open because a magneto will not ring through it, because the alternating current from the magneto in circulating through the numerous turns of the



C. D. HATT, PRESIDENT UNION NO. 9.

coils, will generate an enormous inductive resistance which is often too much for the belt to ring through. When a direct current circuit is convenient, it is far better to use it with incandescent lamps in series to serve as indicators, and also to hold the current down, should a short circuit occur.

A good method of detecting and locating a short circuit in an armature is to excite the fields from another generator, and run the armature slowly without the brushes. If an ammeter is put in

series with the fields it will indicate a sudden drop in current every time the short circuited coil passes under a pole. Run the armature in this way for a short time, then stop it and feel it carefully for a hot coil, which is the short circuited one.

The most important duty of a dynamo tender is to see that the machines do not spark excessively at the brushes. Some of the older types will spark in spite of all that can be done to them, but the more modern machines will usually give very little trouble in this respect if given proper attention. There are numerous causes for sparking, and it is impossible to give a rule which will hold good for every make of dynamo, or even for every machine of the same make. A few general hints on this point will, however, apply to all generators. See that the commutator is smooth and true, and that the mica does not stand above the surface of the bars, so that the brushes do not vibrate, but run smoothly and quietly. It will readily be seen how, if the brush breaks contact for a fraction of a second at every bar, or even at every revolution, it is impossible to prevent a spark, which will gradually roughen the commutator. Also make sure that the brushes are set at the proper distance apart; that is, in a two-pole machine they should be set at an angle of 180° from each other, while in a four-pole machine they should stand 90° apart. Especial attention should be paid to this in multipolar machines, where the brushes are connected in multiple to form two groups. The only proper way to set the brushes in a machine of this kind is to measure the voltage between each pair with a volt meter, and adjust them until these readings are exactly the same. The exact position of the brushes can only be properly determined by experiment. The proper position is that at which the greatest potential is obtained without sparking. This will always be shifted slightly in the direction of rotation from the theoretical position for this reason. When the machine is at rest, and consequently with no current in the armature, if the fields are separately excited,

the lines of magnetic force will take the shortest path from one pole to the other, and the line of commutation, or the line upon which the brushes should be set, will be perpendicular to them. Now start the machine and put a load on it, and a heavy current will flow through the armature, which also becomes strongly magnetized, but in opposition to the fields. This will tend to crowd the lines of force in the pole pieces to the corner where the armature passes from under them, thus giving them a lead in the direction of rotation. Now, as the line of commutation is always perpendicular to the lines of force, the position of the brushes will also be shifted. This amount of lead varies with the load, and depends upon the armature and various other factors; hence, the impossibility of giving a rule applicable to all machines. Should one field magnet be stronger than the other, producing what is termed an unbalanced field, sparking will invariably be the result. This is usually caused by part of one field coil becoming short circuited, thus cutting out some of the turns. The faulty coil may easily be found by measuring the voltage across each one, which should be the same. But if this voltage across one is much less than across the other, this coil is undoubtedly short circuited. An open circuit in an armature is very easily detected by a violent flashing, as the commutator bar corresponding to the defective coil passes from under the brush, as at that instant the circuit is broken, and the entire current arcs from the brush to the commutator bar. When this occurs the machine should be shut down immediately, as the arc will soon destroy the commutator. It sometimes happens that two adjacent bars become slightly burned without any apparent cause, whereas if the connections are carefully examined they will almost invariably be found to be somewhat loose or dirty. In a case of this kind, it is a good plan to disconnect the coils, clean off the wires, and reconnect them, especially if the connections are made by set screws.

It is a well-known fact that there is considerable static electricity generated by the friction of dry belts on their pulleys, and this sometimes reaches an enormous pressure, often shocking a person passing near them. This is responsible for a great deal of trouble, although very seldom blamed for it. The high pressure produces a strain on the insulation, and often disruptive discharges are the result, puncturing the insulation in several places. This can be prevented by forming a suitable path for it to the ground. There is a device for this purpose, called a static arrester, but an arrester may be made by any dynamo tender in the following manner: Cover a small piece of board with tin, and drive nails through it, so as to form a number of points. Place this under the belt with the points toward the belt, and connect the tin to the ground. By using this simple device a great deal of trouble will often be avoided.

NIAGARA ELECTRIC POWER IN BUFFALO.

The difficulties, legal and otherwise, which have delayed the carrying of electric power from Niagara Falls to the

city of Buffalo have now been overcome, and the cars of the Buffalo Railway Company are expected to be operated by this current before winter.

The three-phase system is to be used instead of the two-phase, as has been expected. The amount of power contracted for is one thousand horse power, measured at the point of delivery to the wires of the railway company. The pressure to be used on the transmission line is to be, for the present, 11,000 volts, although this is expected to be doubled when the demand for additional power warrants—the transformer being designed and insulated to stand the higher pressure. This pressure is to be obtained from the 2,200-volt current generated by the dynamos at the Falls by means of step-up transformers.

At the receiving end, the pressure of the line will be reduced by step-down transformers to 400 volts. The railway motors, however, require a direct current, and the 400-volt three-phase current will be changed to a 550-volt direct current, by rotary converters, which, together with the step-down transformers, will be located in the Niagara street power station. The converters will be arranged to operate in connection with the existing steam plant of the railway company.

The contract for the equipment has been placed with the General Electric Company. This is the first step toward the transmission of the power of Niagara Falls to any considerable distance, and its progress will be watched with great interest by all mechanical and electrical engineers. The transformers are to be the largest so far made. There are to be three of them, any two having a capacity of 2,500-horse power. Three are provided in order to have a spare one.

THE ACTION OF THE SHUNT MOTOR.

By Wm. Baxter, Jr.

The general principles of this style of winding can be illustrated by the aid of Fig. 1. Those who have acquired their knowledge of electricity from the old text-books will be somewhat surprised at what we are about to say in

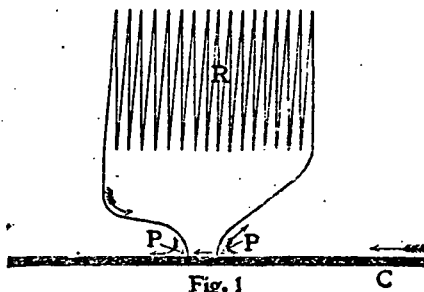


Fig. 1

connection with this diagram. In these books we are told that electricity always takes the shortest path; and that, therefore, if it can get back to the point from whence it started by a short route, it will entirely ignore the long ones. This statement is not true. If two paths are provided for an electric current, and one is very short while the other is very long, it will divide and go through both paths. If a thousand or many thousand paths are provided, it will pass through every one of them; but the amount of

current that will pass through the various paths will be inversely proportional to their resistance.

If in Fig. 1 we assume a current to come along the large conductor C, as shown by the arrow, at the point P it will split, so to speak, and part will pass through the resistance R, while the bulk will continue along the large conductor. If C were a large copper bar and R were composed of many miles of fine wire, the case would not be altered. In fact, if the two points P P' were very close together and R were long enough to go around the world, there would still be a current passing through R. If the

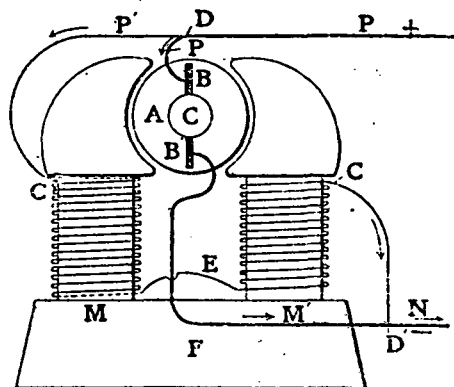


Fig. 2

difference of potential, or pressure, between the points P P' is maintained constant, the current through R will remain unchanged, no matter how much it may be increased or decreased in C. This fact is utilized in shunt-wound motors to obtain a constant field. Fig. 1, in fact, is a simple diagram illustrating the winding of such a motor, the portion of the conductor C, between P and P' representing the armature. Regarding this figure as a diagram of the winding of a shunt motor, we can say that, if the difference of potential between P and P' is kept constant, the current through the field coils R will be constant, and the strength of field will remain unchanged.

A great many students of electricity find difficulty in understanding this statement. They can realize that a part of the current in C will pass through R, but they cannot understand why a reduction of current in C will not cause a corresponding reduction in the current passing through R. If P and P' were connected by a plain conductor, as shown in the figure, their reasoning would be perfectly correct, because, the resistance between P and P' through the large conductor being fixed, the current could only be made to vary by varying the difference of potential between P and P', and this difference of potential would affect the current in both P and R. As has been explained in these columns, the opposition to the current in the armature is made up of the true resistance of the armature wires and the counter electromotive force of the armature, which latter varies with the speed of the motor. Under these circumstances, if the current that operates the motor is maintained at a constant potential, the difference in pressure between P and P' will remain constant. The current between P and P' through the armature will then vary with the speed, but the current through R will

remain constant without regard to what may be taking place in the armature.

Fig. 2, which is a more elaborate diagram of a shunt-wound motor, will enable us to explain more clearly what follows. The current coming in from the source of supply, through P, splits at D; part continuing through P to the brush B, and through the commutator C and armature A to the Brush B', and thus on to N. The other part of the current passes through P' to the terminal C of the field coil M, and from the end of this coil, through the wire E to coil M', from which it passes out at C' and joins N at D'. Now, the difference of potential between the two wires P and N is maintained constant by the generator that supplies the current, without any regard to what takes place in the motor. This being the case, the strength of current through the field coils will remain constant whether it changes through the armature or not.

The resistance opposed to the passage of the current through the armature is, as has been said, composed of two parts—the ohmic resistance of the wire and the counter-electromotive force. The amount of power that the armature will develop will be proportioned to the product of the current by the difference of potential between P and N, less the electromotive force absorbed in overcoming the ohmic resistance of the armature. The amount of current that will pass through the armature will be equal to the difference of potential between P and N, less the counter electromotive force divided by the ohmic resistance. This being the case, it follows that the smaller the armature resistance, the greater the change in current for a given variation in counter electromotive force. If the armature resistance is made very small, a small change in counter electromotive force will cause a considerable change in current. Now, as the field is kept constant, the action will be the same as with a machine having its fields excited from an independent source, and a small change in speed will be followed by a proportionate change in counter electromotive force.

In order to show just how much of a change would be required, we will take a practical example: Suppose we consider a 10-horse power motor having an efficiency of 90 per cent. The 10 per cent. loss would be divided about as follows: Mechanical losses (friction, atmospheric resistance, etc.), 3 per cent.; currents generated in the armature core and pole pieces, hysteresis, etc., 4 per cent.; loss in field coils, 2 per cent.; loss in armature coils, 1 per cent.

In order to make the armature loss 1 per cent., it will be necessary to have the resistance of the wire so low that the electromotive force absorbed by it when the motor is working up to its full rated power will be 1 per cent. of the total electromotive force, or difference of potential of the current. If by reason of a decreased load, causing an increase of speed and counter electromotive force, the current is reduced one-half, the electromotive force absorbed by the armature wire resistance will be one-half of what it was before—that is, one-half of 1 per cent. of the applied E. M. F. In the same way, if the current is reduced one-tenth, the armature wire resistance will absorb only one-tenth of

1 per cent. of the electromotive force. From this it will be seen that, if the armature resistance is made so low that the armature loss at full load is 1 per cent., then the variation in the counter electromotive force that the armature must develop between full and no load will be within 1 per cent. As the armature rotates in a field of constant strength, the counter electromotive force will be exactly proportional to the speed; therefore, the variation in speed of such a motor between full load and no load will be less than 1 per cent.

It may be asked—Can motors be made that will regulate as closely as this? To this we can answer, that not only can they be made, but that, as a matter of fact, nearly all motors of 10-horse power or over, made by first-class concerns, will regulate as closely as this; that is, if the electromotive force of the operating current is kept constant. But this condition is never realized; and on this account such refinement of regulation is never obtained in practice, although, as will be seen, through no fault of the motor. Poor regulation in a shunt-wound motor is not obtainable except with very low efficiency. Although the principles upon which the close regulation of speed in shunt-wound motors depends, are very simple, as the foregoing explanation shows, they were not understood ten or twelve years ago except by a very few of the best electricians.

INTERIOR WIRING.—SWITCH CONTROL.

Switch control has been considered by many to be a problem that solves itself. This may be the case when the general excellence of the result is unimportant, but when other conditions prevail every hint is welcome.

The position of the switch is an important point, but an electrician or engineer is not necessarily the best judge of this. An architect is frequently even more competent, and the owner of the buildings to be wired, while not conversant with current practice, usually has sound ideas on such matters when various common methods are submitted to him.

As a general thing, in small rooms the place for the controlling switch, if there is one, is near the door on the knob side. The first thing desired when en-

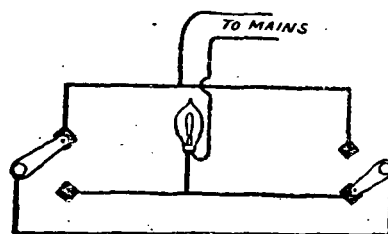


Fig. 1.

tering a dark room is light, and with the switch thus conveniently at hand it can at once be had without advancing further. Similarly, on leaving the room the last thing is to extinguish the light, and it is never convenient to do this by a switch near some desk in the rear of the room, and then meander to the door in the dark. It would seem that this location for a switch is so obvious as not to need pointing out, but judging

from a number of personal experiences searching for a switch in hotel rooms, this is not the case. In one large hotel in New York City, it is necessary to have the electrician show the location of switches to new guests, as they may be behind an inner door in a closet, behind the head-board of a bed, etc.—the switches apparently having been placed with reference to easy wire runs rather than with any thought of convenience in use.

There are, however, many special cases where this rule by no means applies. In lighting a cellar it is convenient to have the switch at the head of the stairs in the room above. The same is true of hallways. In halls and theaters the switches are usually banked in

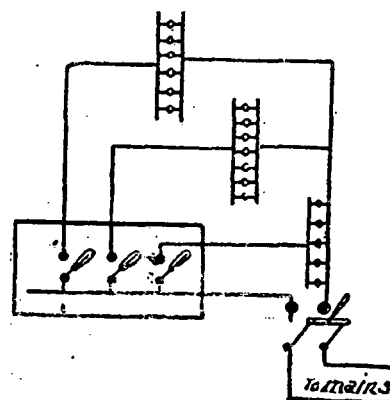


Fig. 2.

a cabinet near the stage in a little room adjacent thereto. In all such cases, when the operator cannot see the lights he is manipulating, the switch should show by its position whether it is off or on. In a sleeping room, while it is convenient to have a switch near the door in the ordinary way, it is often required that a switch be placed within easy reach of the bed, so that the room can be lighted without arising.

Fig. 1 shows an arrangement of connections whereby the lights can be controlled at will from either of two positions, irrespective of the other switch. This is also an excellent device for halls and gangways, where it is desirable to light the hall on entering and to extinguish it at another point after passing through.

Two single-pole, double-throw switches are used. The connections are as shown in the sketch. By tracing the connections, it will be seen at once that the lamp is lighted and extinguished by throwing either switch, as they are in series with each other. If, however, one switch be thrown so that the lamp is out, the latter may be relighted by throwing the other switch to the side that formerly extinguished the lamp. In short, the lamp may be controlled from either station entirely independently of the other. Two-point snap switches are now made for just such cases as these.

Another arrangement that is occasionally useful is shown in Fig. 2, and intended to limit the control of a main switch. For example, suppose the case of a gymnasium or hall in an establishment such as a boarding school. In such a case it may be desirable to limit the number of lights that can be turned on in the room by the occupants. To

do this a single large switch is placed in the room, and is conveniently at hand for those who desire to use it. From this switch, which should ordinarily be a double-pole switch to comply with insurance rules, circuits branch, in each of which is a single-pole switch located in a cabinet under the control of the manager of the building. It will at once be seen that he has complete control of any or all of the circuits, as long as the main switch is thrown. Thus, if the case is that of a gymnasium, which is to be closed at a certain hour, he can at that time extinguish the lights in the gymnasium and leave those in the bath-rooms and lockers burning. As the last man leaves the room, he throws the main switch, thus leaving the entire room dark. In due course, the switch controlling the bath and locker-room lights may be thrown, and thus render general extinction certain in case the last man to leave has been negligent. In other cases also this device may be useful.

In some cases it may be convenient to reverse the arrangement. That is, to have the main switch under the control of the janitor, so that when he leaves the building for the night, he can do so in full confidence that all lights are out, without making a tour of the premises.

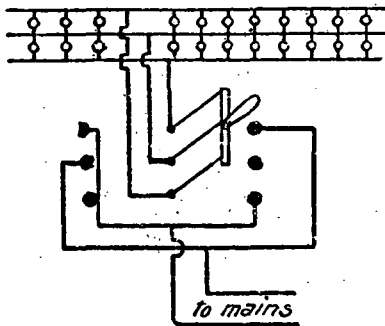


Fig. 3.

In any building receiving light from a local lighting company, a large jack-knife switch should be put in back of the meter, to be opened in case the building is locked up for the summer or similarly left to itself for a period of time. In such a case a plug switch, of which there are several types on the market, is convenient. With such a switch the plug can be removed and locked up, thus effectively preventing the closing of the switch by unauthorized persons.

The theater is, perhaps, the place where the greatest ingenuity in switch control can be utilized, as so many different effects are desirable—the more the better. In such a place it is necessary to control the brilliancy of the lights. In the flies, side and foot-lights, their brilliancy must be completely under control, for any grade of illumination is likely to be needed. In the main house, however, it is not necessary to have such complete control of the brilliancy of the lamps, and if this control were done by the ordinary method of resistance in series, it would be extremely wasteful of power where so many lights are in circuit. This is an important factor where the consumer uses a meter.

The main body of the theater should be wired on the principle shown in Fig.

3. This will render resistance unnecessary. It will, it is true, give but two gradations of brilliancy, but it will avoid both the first cost and subsequent waste of regulating resistances. It is suffi-

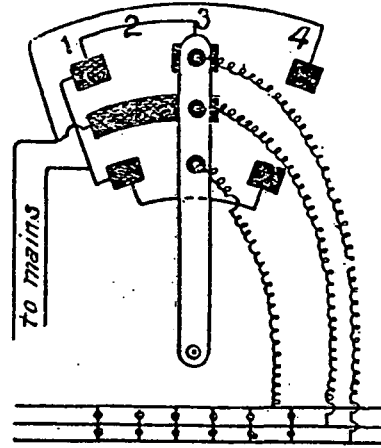


Fig. 4.

cient for the cheap theaters, and concert halls, and is not out of place in the main auditorium of more elaborate establishments. It will be seen that the device simply connects the lamps in series or multiple across the mains, by the throw of a double-throw, three-pole switch.

If the contractor has facilities, he can make the special switch shown in Fig. 4, and thereby offer his customers a control having three steps, namely: All the lamps at full voltage; half the lamps at full voltage; all the lamps at half voltage. Such switches controlling the circuits in a theater auditorium would give a gradation that should satisfy the most fastidious proprietor. It will be noted that there are really four steps to the switch; that is, either half of the lamps are available. Remembering that when the performance has begun, the lights in the lobbies and ante-rooms are unimportant, it may easily be seen that these lights may be worked in as a part of one of the halves of the theater circuits. By this simple means the halves, though equal in number, will be unequal in the auditorium of the theater, and thus four instead of three grades of light are obtained therein.

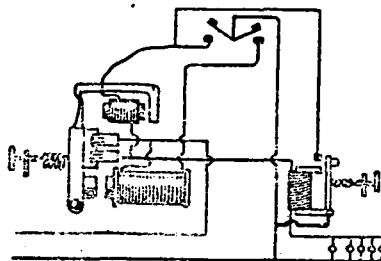


Fig. 5.

If it is not desirable to have the lights in the lobbies vary up and down in this manner, the extra portion of the half giving the least grade of illumination at full candle power, may be formed into an electric sign on the front of the building. The fluctuation of the lighting of this sign will serve to attract attention to it from the street, and means may be provided for lighting it independently. In any of the combina-

tions, the theater manager is getting some good out of all his current, and none is wasted in heating resistance. Moreover, such switches as those described can be made at much less cost than a controlling rheostat.

It is to be understood that the switch shown in Fig. 4, is merely diagrammatic, and that it needs to be suitably designed mechanically. It may be added that the three studs on the switch arm are not electrically connected, but merely make contact with the plates beneath them, as the switch arm swings over. Such a switch could readily be designed on the principles of street car controller.

The brilliancy of sign lamps can be raised in the same way. In a large electric sign with two circuits thus controlled, the manipulation of the switches will at once attract attention. The circuits should be so arranged that their lamps alternate with each other on the sign.

There are several types of switches now on the market, known as relay switches. The actual switches themselves are operated by magnets, the circuits of which are controlled by buttons. Pressing one push button energizes a magnet and tightly closes a switch and a little latch keeps it from flying open. A second button operates a magnet which trips this catch and opens the circuit. By a very simple device this switch is also made to act as a circuit breaker. A coil of wire in series with the circuit to be protected is adapted to raise an armature and close the trip magnet circuit whenever the current becomes excessive.

This circuit breaker once installed, needs no attention. It resets itself and will not stay closed till the trouble is removed. Another feature of the switch lies in the fact that the duty of the trip magnet is very light, and it will, therefore, respond with great accuracy to the current for which it is set. There is no reason why this switch should not find favor. Fig. 5 is a diagrammatic view of the connections of a single-pole switch of this type.

American Electrician.

TORQUE AND COUNTER-TORQUE. ELECTROMOTIVE FORCE AND COUNTER-ELECTROMOTIVE FORCE.

A belt driving a dynamo exerts a certain pull on the edge of the pulley which tends to turn it, or produces a torque, as it has come to be called. The product of this pull by the velocity of the belt per second or minute is the power put into the dynamo.

The generation of current consumes work and offers resistance to the turning of the armature—that is, it exerts a counter-torque, which is equal to the applied torque less the torque required to turn the machine itself. If an engine connected to one end of a shaft drive an air compressor connected to the other end, the engine exerts a torque which turns the shaft, and the air compressor exerts a counter-torque which resists the turning. The counter-torque is equal to the applied torque less the losses of transmission, and the counter-torque, divided by the applied torque, gives the efficiency of the machine. Just so with the armature of a dynamo—the counter-

torque, divided by the applied torque, gives its efficiency. An explanation of counter-torque is useful, because it furnishes the readiest means of explaining that great mystery to many—the counter-electro-motive force of an electric motor.

Any effort to do work meets with resistance, and the doing of work is, in fact, the covering of resistance. In a dynamo three forces are at work—the applied torque, which represents the effort to drive the machine; the electro-motive force, which produces current and represents the result of the machine action; and the counter-torque, which represents the resistance due to the work done. In an electric motor there are also three forces at work—the applied electro-motive force, which represents the effort to drive the machine; the torque, which produces motion and represents the result of the machine's action; and the counter-electro-motive force, which represents the resistance due to the work done. In the generator, two of the forces are mechanical and one electrical. In the motor, two are electrical and one mechanical.

Imagine an engine driving a machine through a train of belts and pulleys. The power given by the engine to the first belt is the product of the pull on that belt by its belt velocity. The power given out by the last belt to the machine is likewise the product of the pull on it by its velocity. The second product is less than the first by the losses of the transmission. Divide one by the other and we have:

$$\frac{\text{Power delivered by last belt}}{\text{power absorbed from engine}} = \frac{\text{pull on last belt} \times \text{speed of last belt}}{\text{pull on first belt} \times \text{speed of first belt.}}$$

The power given up by a current in driving an armature is analogous to the power given by the engine to the first belt, and the power delivered by the armature is analogous to that delivered by the last belt—the second amount being smaller than the first by the losses of transmission. The power given up by the current is equal to the product of its volts of electromotive force by the amperes of current, and the power delivered by the armature is the product of the volts of counter-electromotive force by the amperes, precisely as the power delivered by the last belt is equal to the pull on it (that is, the resistance of the machine to turning) multiplied by its velocity.

Dividing the power delivered by the power absorbed from the current, we have:

$$\frac{\text{Power delivered by armature}}{\text{power absorbed from current}} = \frac{\text{counter E. M. F.} \times \text{amperes}}{\text{applied E. M. F.} \times \text{amperes.}}$$

Going back to the mechanical transmission, imagine the proportion of the pulleys to be such that the speeds of the first and last belts are the same. Having the same speed in both numerator and denominator, it may be canceled out, giving:

$$\frac{\text{Power delivered by last belt}}{\text{power absorbed from engine}} = \frac{\text{pull on last belt}}{\text{pull on first belt.}}$$

Now, with an electric motor the amperes of our equation are those of the current through the armature, and are, of course, the same in both numerator and denominator. They, like the belt speeds, may then be canceled out, giving:

$$\frac{\text{Power delivered by armature}}{\text{power absorbed from current}} = \frac{\text{counter E. M. F.}}{\text{applied E. M. F.}}$$

The $\frac{\text{power delivered at last belt}}{\text{power absorbed from engine}}$ is, of course, the efficiency of the transmission, and in the same way the $\frac{\text{power delivered by armature}}{\text{power absorbed from current}}$

is the efficiency of the transmission, which, we have seen, is the ratio of the counter E. M. F. divided by the applied E. M. F. This is an important law of electric motors. It should be distinctly noted here that the absorbed power referred to is that supplied to the armature, and the power delivered is also by the armature. The resulting ratio is the efficiency of the armature. In point of fact, power is also consumed in the field coils and in the bearings of the armature shaft, so that the efficiency of the whole machine, between the current supplied to the terminals and the power delivered by the belt pulley, would be less than that above considered.

KERN RIVER POWER PLANT.

The power of the Kern river, the third largest stream in California, is now about to be utilized, the work undertaken by the Power Development Company being nearly completed.

The contract for the electrical equipment has been awarded to the General Electric Company, whose three-phase apparatus will be used to transmit the power of the river to Bakersfield, a distance of fourteen miles as the bird flies.

The point selected for the power-house is at the mouth of the canyon on the north side of the Kern River, almost sixteen miles northeast from Bakersfield by wagon road. Here the stream, after a boisterous course of 100 miles from the slopes of Mt. Whitney, through a series of rugged, precipitous canyons, forms a number of cataracts and rapids, previous to taking a placid course through the cultivated valley lands. The point of diversion of the necessary flow for the power is some 9,000 feet up the canyon. Some idea of the difficulties to be overcome in this work may be gained from the fact that to secure a bed for the flume a roadway was cut from the solid rock along the sides of the canyon. All the timber was hauled by a team, a distance of sixteen miles, to the south side of the river. A bridge was thrown across and a tramway 325 feet long, with a grade of 30 per cent, laid up the steep hill to the point where the flume was to end. A steam saw-mill was then set up at the foot of this tramway, the timber cut to proper dimensions, loaded on the cars and hauled up the grade.

The flume was begun at the power-house end.

This flume is 8 feet wide and 6 feet deep and is covered. A railroad track is laid upon the cover for the full length

of the flume, 8,000 feet. There are no sharp angles, the changes in the course being made by curves and tangents. The grade is 5.8 feet to the mile, and 475,000 feet of red wood is used in the construction of the flume, which at one point is carried on an arch with 60 feet span over a bad place on the cliff. The flow is calculated at 280 cubic feet per second. At its terminus at the mouth of the canyon, 574.9 feet from the point where it leaves the river, it is 202 feet above the power-house. Here the water enters a steel pipe 540 feet long and 5 feet 6 inches in diameter. The fall from the end of the flume to the power house is 202.9 feet, and the capacity of the water is estimated at 7,500 H. P.

The electrical equipment will consist at first of two 450 Kilowatt General Electric three-phase generators, running at 275 revolutions per minute. The voltage at the dynamo terminals will be 550 volts. This will be raised in step-up transformers to 11,000 volts, and will be carried on six No. 4 bare copper wires to the sub-station at Bakersfield, where it will be transformed down to 2,000 volts for distribution.

The current will be utilized at first to operate an extensive system of electric railroads connecting Bakersfield with Kern and other districts. It will also be applied at once to street and house lighting, as well as to the operation of pumps for irrigation purposes. The mines in the mountains to the east will also probably take current for their mills, hoists, pumps, etc.

The president of the company is Chas. Webb Howard; W. F. Goad is vice-president and C. N. Beal, secretary and treasurer. The work is being pushed to completion as rapidly as possible, and it is expected that by November 1 the current will be turned into the transmission wires.

PRESENT AND PROSPECTIVE WORK.

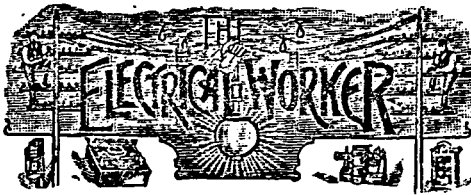
Milwaukee, Wis.—Work has commenced on the electric railway between Milwaukee, Racine, and Kenosha.

Saginaw, Mich.—The eight electric light towers which were blown down during a recent storm will be re-erected.

Peoria, Ill.—The Glen Oak and Prospect Heights Railway Co. has been granted a franchise for an electric street railway in Peoria.

Joliet, Ill.—The Joliet Street Railway Co. has been reorganized and the capital stock is placed at \$300,000. The lines will be extended and improvements will be made at once.

Detroit, Mich.—According to the Detroit "Tribune," the Detroit Telephone Co.'s plant is rapidly approaching completion. Of the sixty miles of conduit that are to be laid, forty miles have already been laid, and the remaining twenty miles will be completed in a short time. The company has contracted with the Standard Underground Cable Co. of Pittsburg, Pa., for the laying of cable, and shipments of cable to Detroit will begin in two weeks. The poles for outside of the half-mile circle have been purchased and will be set within three weeks.



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St. Louis, Mo., September, 1896.

W. N. GATES, - SPECIAL ADVERTISING AGENT,
 29 Euclid Avenue, CLEVELAND, OHIO.



Do not get so interested in politics as
 to neglect your Union.

Neither silver dollars nor silver cer-
 tificates are redeemed in gold. What
 gives them their value?

It must be rather embarrassing to
 some of our labor leaders and politicians
 to have their past utterances on the
 money question compared with their
 present views.

In 1867 we had no tramps, no mort-
 gaged farms, no trusts, and only a few
 millionaires. In 1890 we had 3,000,000
 tramps, 31,000 millionaires who owned
 half the total wealth of the country. Has
 the gold standard had anything to do
 with this?

In 1860 the total wealth of the United
 States was \$16,000,000,000, of which the
 farmers owned \$7,000,000,000, or nearly
 44 per cent. In 1890 the total wealth
 was \$62,000,000,000, of which the firm-
 ers owned \$15,000,000,000, or 24 per cent.
 Has the gold standard had anything to
 do with this?

We have received the first number of
 the "Telegraphers' Advocate," published
 weekly by the Ruskin Co-operative As-
 sociation, Cave Mills, Tenn. It is the

same size and style as the "Coming Na-
 tion," which is published at the same
 place. The "Telegraphers' Advocate" is
 ably edited by an ex-operator, and advo-
 cates government ownership of the tele-
 graph.

In a recent circular, the National Union
 of the United Brewery Workmen of the
 United States calls attention to the non-
 union breweries which have been placed
 on the unfair list by the American Fed-
 eration of Labor. Among them we no-
 tice Geo. Ehret of New York, Bergner &
 Engel of Philadelphia, Ballentine Brew-
 ing Co. of Newark, N. J.; St. Louis Brew-
 ing Association (English Syndicate), of
 St. Louis.

Party politics should not be discussed
 in Union meetings, and trade unions
 should keep out of politics, for, while all
 intelligent workmen can agree on trade
 union lines, they cannot agree on politi-
 cal theories—and party ties are hard to
 break. When a Union as an organization
 goes into politics, its usefulness as a
 Union is at an end. But members of La-
 bor Unions—citizens of this great repub-
 lic—should take an active interest in po-
 litics, from the primaries to the general
 election, and they neglect a most sacred
 duty if they do not.

Steps are being taken to form a na-
 tional association of electricians and su-
 perintendents of police and fire signal
 systems. A meeting has been called for
 September 15th in Brooklyn. The plan
 has been considered for several years,
 but action was taken only recently. The
 plan was first suggested by the forma-
 tion of the National Association of Chief
 Engineers, and will be conducted on
 something of the same basis. Meetings
 will be held once a year, the location
 changing to each of the cities in turn.
 Papers on various subjects connected
 with wires will be read, and views on
 various questions exchanged.

Secretary Carlisle, in a speech in the
 House of Representatives in 1879, before
 he was hypnotized by G. Cleveland, used
 the following language:

"According to my view of the subject,
 the conspiracy which seems to have been
 formed here and in Europe to destroy by
 legislation and otherwise from three-sev-
 enths to one-half of the metallic money
 of the world, is the most gigantic crime
 of this or any other age. The consum-
 mation of such a scheme would ultimate-
 ly entail more misery upon the human
 race than all the wars, pestilences, and
 famines that ever occurred in the his-
 tory of the world."

Electrical engineers are complaining
 because college professors undertake
 commercial work. The claim is set up
 that professors with an equipment of
 apparatus provided without expense to
 them and a body of students on call, to
 act as assistants without pay, can and
 do undertake expert work at prices
 which engineers in private practice can-
 not attempt.

Electrical mechanics have for years
 had to compete with students who work
 either for nothing or for very small
 wages, to get, as they say, experience.
 The professors thought this was all right

until the shoe began to pinch themselves.
 The General Electric Works at Schneec-
 tady, the Westinghouse factories at
 Pittsburg, and a number of other large
 factories have for years been employing
 students at wages that no mechanic could
 work at and pay his board, until wages
 have been reduced to such a point that
 the most skilled mechanic to-day in any
 of the departments can scarcely earn
 over \$1.50 a day.

UNIONISM.

By Geo. S. Crabbe.

Several different constructions are
 placed upon the term "unionism." To
 the rich it suggests mobs, howls, drunk-
 en ribaldry, clubs, revolvers, and gen-
 eral lawlessness. To a certain class of
 workingmen it is synonymous of danger
 —to their jobs. To the ne'er-do-well and
 thug it brings with it a remembrance
 perhaps of a certain strike wherein they
 were active in the wrecking and burn-
 ing of property, and in contributing to
 the general detriment of those who were
 striking for honor and for bread. But
 there are men to whom the euphonious
 word "union" suggests freedom honor-
 ably acquired, and brings to them the
 oft repeated "In union there is
 strength"—takes them into the realms
 of a happy future, where they see the
 managers of large concerns and the in-
 tellectual workingmen standing pleas-
 antly chatting upon the corner, or walk-
 ing arm in arm down the broad con-
 venient sidewalks of well-paved streets
 and avenues. And such will be the con-
 ditions when the union shall have ac-
 complished its work.

What efforts have yet to be spent to
 attain that glorious end! What ideas of
 prejudice have yet to be exploded! Then
 there are measures to which the
 workingmen shall have to resort, where-
 by that class of men, who lay around
 even in good times may be corralled and
 their destructiveness made impotent.

Then let there be a start made to com-
 pel the employer to see the worth of the
 employe. Train the intellect. Let the
 "striker" learn to keep his head level,
 and to present his grievances in an in-
 tellectual manner. Then the employer
 will be compelled by force of God's laws
 to respectfully give an audience. In the
 majority of cases it is not human na-
 ture to be driven, and the employer has
 some rights which he will have respect-
 ed. Cast aside the club and bulldog re-
 volver; let them be the weapons of the
 past. Rather march into the great fight
 for liberty with one hand holding a
 primer and in the other a slate and
 pencil, than to get below the level of a
 man. "Great minds trained by books
 and thought have in time some great
 deeds wrought," and there are great in-
 tellects possessed by workingmen in the
 world to-day; intellects for which more
 than passing regard would be had were
 their channels broadened by the dredge
 of knowledge.

There are men who join unions not
 for the betterment of mankind in gen-
 eral, but for their own personal gain;
 thinking not of the world as a whole,
 not of the fact that the more harmony
 there exists in this world of ours the
 better in the long race it is for each of
 us individually, but of their own con-
 ditions—their pocketbooks for the time

being: using their heads for nothing only the common routine of a hum-drum life, gradually growing more hum-drum. They are incapable of thinking far enough into the future to realize the benefits to be accrued by real unionism.

Many times has the old saying been repeated: "It's an ill wind that blows no one good," and the present hard times have in them at least one virtue—they have caused the world's backbone, the laborer, to think; as it were God's method of compulsory education, the stringent circumstances set to work many brains which would otherwise remain in idleness.

What man amongst us that is not elated when he thinks of the giant strides made by the workingman within the last few years? What man—when he thinks—is unable to see that the great engine of this acceleration is the work of combined thought?

Let every workingman become a unionist for the good of mankind, and not for the purpose of furthering any special or individual ends of his own. Let us all be enabled to see that a combination of brain is much farther advanced than a union of clubs and clouded brows. Let us march into the great fight with the watchword of "Right," and as we gain our way towards liberty, remember that intellectuality is the power of God.

HIGH DUES ARE NECESSARY TO SUCCESS.

All experience in the trade union movement demonstrates that the higher the dues members pay into their trade unions, the greater have been the returns on their investment. The union has instilled confidence into the membership as to its stability. The non-union man is influenced by this manifestation of success. The union has shown its trustworthiness and permanency. It secures better wages and less hours and more respectful treatment to the members; it commands either the fear or the respect of the employers for the demands of the union; it reduces strikes and lockouts to a minimum, while continually securing concessions in the interest of the trade.

High dues in unions carries with it the payment of benefits to members, thus providing not only in cases of trade disputes, but also those benefits which are particularly the mainstay of the organization during dull periods of stagnation in trade.

The members, and those depending upon them, see at a glance that the union is not only of remote, but of immediate, benefit to the members and their families. It deserves and receives their confidence, since it is their protector and defender, as well as benefactor, in all the trials that come to them in their economic environments. A union based upon high dues and benefits to its members is saved from the rise and fall, the rushing in and rushing out, of the membership. It seldom has what is known as a boom, but, on the other hand, of necessity, the boom does not collapse. The growth of such a union is gradual, but uninterrupted.

The union is in business to stay. Its expressed will is the result of calm deliberation, from which it cannot and will

not be diverted, and when it makes a demand on behalf of its membership it has years of experience, years of discipline, years of accumulated savings behind it, and will brook no attempt to turn it from its course or to defeat it in achieving its just and rightful demands.

The strongest opposition made by employers to any request, much less a demand, is to those presented by the unorganized, the poorly organized and the illy-prepared workers for any offensive or defensive struggle, to secure an advantage, or to prevent the loss of one already achieved.

The universal experience is, that thousands of strikes would be prevented and the concessions asked by the workers secured, were it not for the knowledge the employers have that the workers, if organized, have a small treasury, or none at all, and the thought is entertained that in a few days, or in a week or two at most, the workers will be compelled, through sheer want, to succumb.

There is no position so disastrous to the position of the workers engaged in a trade dispute than when, in the first days of the struggle, they are compelled to solicit contributions from their fellow-toilers to aid them in their difficulties. It is at once accepted by the employers as a declaration of weakness and impotency.

All movements do not press forward, all saving is not economy, and the short-sighted policy of workmen who refuse to pay reasonable dues into the union of their trade is but plugging the spigot and allowing the flow uninterrupted at the bung-hole. The workers who fail to organize and, in their organizations, pay reasonably high dues to create a defense fund, and funds which shall stand them in good stead in all the vicissitudes of life, simply pay tenfold into the coffers of their employers in the shape of lower wages and longer hours, and win the contempt of their employers, their friends and fellow-citizens.

Much of the good work accomplished by the trade unions, based upon the sure foundation of high dues, large benefits and protection to the membership, is the fact, first, that so large a number of workers are unorganized, and, further still, by those who are organized, but who, through short-sighted policy and parsimony, act like a check in a cog of the wheel of industrial progress and emancipation.

Our organized workers have themselves to blame in all cases, if they fail to profit by the lessons experience teaches when having loose financial systems, or rather no financial system at all, since low dues engender carelessness and absence of regulations regarding finances, of which there is little in the organization. We say that they are responsible to themselves for the frequent reduction of their wages, and the imposition upon them of onerous and unfair conditions of labor.

It may be generally stated as a truism that low dues, low wages, long hours and servility are natural allies and the result of disorganization or organization on the basis of low dues; while, on the other hand, organizations based on high dues, secures for the workers the highest wages, the shortest number

of hours of labor, self-respect and respect of others, independence and manhood.

There is no good argument against the workers paying higher dues in their unions than is now generally the case. The trade unions should be, as they are destined to be, the organizations to protect the workers, advance their interests and come to their aid in all the ills of life.

There is no trade union on earth, which has inaugurated the system of high dues and benefits, which has not lived through all the stormy times of industrial, financial and commercial panics and crisis. There is no trade union on earth, based upon high dues and benefits, which has failed to keep the promises made to its members. There is no trade union, based upon high dues and benefits, which has not secured the highest and best conditions of labor as compared to other workers. There is no trade union on earth, based upon high dues and benefits, which does not perform the functions of government more honorably, more cheaply and at a lesser cost than any insurance or charitable institution on earth. There is no organization anywhere which gives to its members anything like the returns as do the trade unions.

Much of the work, not only of organizing, but more especially of reorganizing, the workers, would be saved; hence, much of lost time and of lost ground would be spared the workers if they would now—yes, now—adopt the wise policy of paying into their unions high dues, receiving from it in return greater benefits and advantages. Then would the trade unions form a great chain, composed of powerful links, encircling industry and commerce, making our lives and the lives of those we love safer and better, and usher in a brighter and happier future.—American Federationist.

PRESENT AND PROSPECTIVE WORK.

Madison, Wis.—Bids are asked for a complete municipal electric lighting plant for this city. All bids must be in by noon September 22d.

Oneonta, N. Y.—The old system of street railway has been transferred to the Oneonta Street Railway Co., who have already begun work on the new electric road.

Muskegon, Mich.—A franchise has been granted to a competitive telephone company at Muskegon, Mich., and it is claimed that an exchange of at least 400 subscribers will be installed.

Uniontown, Pa.—The Chicago Construction Co. has been awarded the contract for an extension of the Uniontown Electric Street Railway to Fairchance. The new road will be six miles long. It is to be in operation in October.

Jeffersonville, Ind.—The Jeffersonville Telephone Co. is being organized, with a capital stock of \$50,000, of which \$25,000 has already been paid in. It is expected that the company, a purely local one, will be ready for business by October 1st. Lines will connect New Albany and all the suburbs of the two cities.

THEY WERE FISH, NOT MEN.

But Their Condition Is a Strangely Familiar One.

PASSING RESOLUTIONS WAS POPULAR WITH THEM.

Somehow They Did Not Appear to Accomplish Much—The Big Fish Had the Best of It.

Under the title of "Only Fish, Not Men," the Single Tax League of Victoria, Australia, publishes a leaflet which is such a delicious take-off upon the position of many so-called reformers in America that we cannot refrain from giving it in full. It is as follows:

The fish were getting packed closer and closer, and the struggle to obtain even a bare existence was daily growing harder. To an onlooker the reason was plain. The fish had granted the best of their waters to the Pike family, leaving themselves but impoverished shallows and crowded pools in which to search for their daily food.

A meeting was called to devise means of relief, and to endeavor to solve the intricate problem of how to provide the opportunity for all to obtain a better and easier living.

The first speaker stated that to his mind the cause of his trouble was that there were too many fish. (Cheers.) Until the superfluous fish were got rid of the trouble would go on, aye, would increase. (Renewed cheers.) Would any of the fish who cheered so uproariously admit that they personally were superfluous? He paused for a reply. It was just as he expected. Fish were willing to cry out about overpopulation, but he never yet knew a fish to admit that he personally was superfluous. He was always the fish next door. As for himself, speaking conscientiously, he knew and felt he was greatly needed (hisses), but there were fish he could name who, if he had his way—(Cries of "Sit down!" "You are superfluous!" and uproar.)

The next speaker had traveled about a great deal lately, and plainly saw that they were suffering from overproduction. (Hear! Hear!) There were too many good things, and the Pikes had assured him they had absolutely more than they could consume. (A voice: "We don't get any.") He denounced the interruption, and despised the interrupter. He had not learnt the first lesson of his class, to be content. To proceed. He maintained that there was too much food—for the Pikes. And here let him say, they owed much to the Pikes. (Hear! Hear!) If it were not for the Pikes water would be abundant, and that would be disastrous. (Cheers.) It would go down in value and ruin would overtake—(A voice: "The Pikes," and sensation.) He called on the constable to turn that fish out. (Vociferous cheers.) As he was saying, they would not value the water so highly unless their supply was kept strictly limited. (Applause.) He congratulated them on the endurance with which they faced their troubles. They were worthy sons of noble sires. Let them be brave during this present crisis, and above all, content, for they were never so well off in their lives. (Immense cheering.)

The third speaker said he was tired of this eternal talk about water. Some of the fish seemed to have water on the brain. They could not all live in the water. (Laughter.) He appealed to his friend, the shrimp. (Roars of laughter.) Anyway, the water question was of minor importance, and should occupy a subordinate place in their political platform. (Applause.) He despised fads and faddists. They had too many philosophers in their midst. What was wanted was something practical (cheers), and, therefore, he believed in passing resolutions. (Great cheering.) The resolution he had to propose was: "That a deputation should wait upon the Pikes, and plead for aid in the form of charitable relief." (Cheers.) That was his way out of the difficulty, and the problem could be solved in no other manner. (Cheers.)

The last speaker rose to second the resolution proposed. He regretted to see they had agitators in their midst. Willy, unscrupulous, self-seeking agitators; mean, insolent and contemptible, who, with revolting mendacity, poured forth inflammatory utterances calculated to sow discontent, and stir up strife where all should be peace and harmony. Personally, he was, perhaps, in a far better position than any of his friends present, and he was a personal friend of the Pikes. He was content. Let them follow his example. The clouds would pass over. He could assure them times were on the mend. (Cheers.) They had turned the corner. (Great cheering.) One thing he might suggest was, that they should practice self-denial. In this way their ills could be cured—at least, for a time. In conclusion, he would urge them not to pry irreverently into inscrutable designs of an all-seeing Providence. No doubt all was designed for a wise end. (Interruption and confusion, caused by a small fish protesting against the remarks of the speaker.) He congratulated them on the praiseworthy manner in which they had crushed the miserable malcontent who had dared to interrupt at that solemn moment. He called on them, one and all, to arise in their fishhood and carry the resolution with acclamation. Thus would their loyalty and patriotism be broadly proclaimed, and a listening world would once again be inspired with confidence. Yes, confidence! The one and only thing now needed was confidence! The resolution was then put and carried amidst tremendous cheering, and the vast assemblage, after singing with enthusiasm, "God Save the Pikes," dispersed—to starve.

ALWAYS KNOW WHAT YOU ARE TALKING ABOUT.

The French Academy is said to have spent many years in discussing the reason why if you dropped a fish into a jar full of water none of the water would spill out. Folios of argument to explain the apparent phenomenon were filed away in their records to perpetuate the scientific wisdom of the disputants. At last an ignoramus from the "rural districts" dropped in, and, for a "cod," was asked why it was. He said: "Is that a fact? Let's see you drop the fish in." The water spilled. The scientific junta threw up their hands with disgust and cried, "Mon Dieu, we never thought of

testing the fact; we have been assuming it and discussing the reason why."

This illustration is entirely apropos to the gold and silver contention which has agitated the American public for twenty-three years.

The gold standard people have taunted and bully-ragged the silver people with the statement that the only reason we were not now on a 53-cent silver basis, the laboring people paid with a discredited dollar and the country's finances "Mexicanized," was that the government "kept silver at parity with gold by keeping a gold dollar behind every silver dollar; that the silver dollar held up its battered, bruised and bleeding countenance alone, because it could say, with scabby old Job, "I know that my redeemer liveth."

Now, "fore God," as the negro said, has it occurred to anyone to ask if this was a fact? Is there any redemption for the silver dollar or the silver certificate in gold anywhere on the face of the earth? "No, no," comes the response, from sage and fool alike. To make the point perfectly clear and correct, beyond controversy, I quote from a circular issued by Secretary Carlisle from the Treasury, August 2, 1896:

"Neither silver dollars nor silver certificates are redeemed in gold."

The transparent fact, the absolute truth, then, is that the six hundred and forty million dollars of silver in circulation in this country is at par with gold without redemption, and in spite of the fact that the commodity price of silver bullion is only 53 cents compared to gold, and it is also the fact that not only is there not a line upon the statute books of the United States which authorizes the Treasury, or any of its officers, to exchange gold for silver dollars or silver certificates, and not only this, but it is also true that on no single occasion has the Treasury ever attempted to do so.

Then what is it that makes the silver dollar equal in real value to the gold dollar? It is simply because the United States Government, by its stamp upon it, says it is a dollar, and with that stamp upon it, not simply signifying, as the gold men say, that it contains 371 1/2 grains of pure silver, but really signifying that it is a genuine dollar of lawful currency and a legal tender for all debts.

It circulates side by side with the gold dollar, because, for all the legitimate purposes for which men desire money, it is just as efficacious as the gold dollar. It will buy a gold dollar's worth of labor, of commodities, and pay a gold dollar's worth of debts at any place within the limits of our broad land.

Is this not a perfect object lesson of the parity of gold and silver money in the United States, in spite of the apparently strong effort of the government, seemingly in the interest of the money power, the creditor classes, to depreciate silver money and destroy the parity between it and gold?—Plebian, in Eight-Hour Herald.

We understand that an incandescent lamp forms a part of the design for the new issue of two and five dollar bills. We cannot affirm the correctness of this report. We are waiting for some kind friend to permit us to look at one or both kinds of bills. Who will be first? Don't all speak at once.—Electrical Review.

FROM OUR UNIONS.

"BALDY'S" EXCUSE FOR LIVING.

Local Union No. 1 is booming, and has every prospect of being one of the strongest unions in the city. The boys are going at things in a business-like manner. They are following the old adage—"Strike while the iron is hot." Although the times are rather hard, the ardor of Union men has increased. Anyone interested in the welfare of the working people views matters as they look now with pleasant expectation.

Electrical work here is rather under the average, but we cannot say it is very dull. There are a number of jobs under way, and others coming in, and rumor has rather bright prospects in the future. The contract for wiring the new City Hall has been let to Bruckman Electrical Co., E. G. Bruckman, manager. Mr. Bruckman has been opposed to unions for some time, but when approached by a committee from the Building Trades Council, composed of three members, as follows, the secretary of the Tin, Sheet Iron and Cornice Workers, Bro. Steinbliss, secretary of the Building Trades Council, and Bro. Peebles, of Local Union No. 1, N. B. E. W. of A., Mr. Bruckman received them in a very becoming manner and conceded every demand, with the remark that he considered them very reasonable, and pledged himself to hire none but union men, and to comply with our working rules to the letter. Also, if any differences should arise, to submit them to arbitration.

The railroad firemen are rather slow coming in with us, but all claim the cause of delay is their inability to get off on meeting nights. The excuse is rather thin, but then they do things that rather forces a person to be lenient with them. There is no pleasure without some toil, so keep up your spirits and try again. One failure does not decide a victory. Union labor is now beginning to reap the reward of its former labor.

The prospects for Labor Day demonstrations are the best this year of any year in the history of St. Louis. The Trades and Labor Union will parade, and have a picnic at Concordia Park. The Building Trades Council will have a grand time at Offenstien's Grove. The Tinnies will parade in uniform, and expect to have two hundred and fifty members in line. All trades affiliating will be well represented. The programme is one that, if carried out, will be the grandest affair ever put through here. The Electrical Workers will be there nearly to a man, and expect to carry away some of the prizes. If the weather is suitable and things go according to arrangements, the affair will be the talk of the town.

The theaters are opening and things are taking on their autumn clothes. Some of the nights make a fellow think of heavier clothing, and those that have been careless must begin to hustle and get ready for old Crimp.

When I look back and see what No. 1 has had to contend with, and how nobly it has come to the front, it makes me proud. Our meetings are well attended and nothing has occurred of late to cause the most fastidious to blush. There seems to be a friendly rivalry among the boys, and I think there will have to be

a prize for good deportment given by the Union.

Bro. H. T. Sullivan of St. Joseph, Mo., has been in the city for several days introducing an advertising scheme he has on the road, and expresses himself as well pleased with the success of the venture. He is a Union man to the core, and deserves the help of all brothers.

Local Union No. 6, Theatrical Brotherhood, is rather jubilant over the prospect of a settlement of their grievance. No. 6 deserves the assistance of all fair-minded people, and Union labor in particular. As an organization they are Union and true blue, and all that I have met are gentlemen, if not millionaires. Remember them in whatever way you can, and rest assured any favor will be appreciated.

Electrical Workers, keep up your stroke, for you have things rising, and any lack of energy may send you on the back track.

Always with you heart and mind in the cause of Labor, I am

Yours truly,
W. S. PEEBLES,
Press Secretary.

FROM THE GOLDEN GATE.

Well, everything is working OK. All the boys are busy, some in town and some out. The Telephone sent a big gang out in the country, and the Light is busy, as usual. But the boys at the Light have got a surprise in the shape of a 6,000-volt circuit, direct current. They are a little timid at present, but we will see what they will do later on.

Our boys over at the Union Iron Works had a taste of this "man eating current." Bro. Hopkins was putting in a switch on one of these big circuits, and in doing so, through some cause or other, got a short or and got his eyebrows burned, but fortunately not very seriously.

One young man, in handling a sewing machine in the Donahue Building that is run by our high tension current, was trying to separate the wires, thinking perhaps that that was the reason his machine did not work properly. He put one hand on an iron bar, while he put the other between the wires to separate them, and was burned to death.

A sign painter yesterday, in moving a sign at 628 Market street, got badly burned on hands and feet, by getting in contact with said current.

A. C. JOHNSON,
Press Secretary.

RESOLUTIONS ADOPTED ON THE DEATH OF JAS. L. DAWSON, BY UNION NO. 6, SAN FRANCISCO, CAL.

Whereas, Our union has sustained a sad loss in the death of Bro. James L. Dawson,

Resolved, That we, as a brotherly organization, pay tribute to his memory in these lines, as a character worthy of confidence, honor and justice, and that death was met as life had been lived.

Resolved, That as a union we most humbly bow submissive to the will of an allwise God.

Resolved, That we drape our charter for the period of thirty days, as a token of respect. Further,

Resolved, That we spread a copy of these resolutions on our minute book of Local No. 6, and that a copy be forwarded to our official journal for publication.

A. F. IRWIN,
A. C. JOHNSON,
G. P. MANNING,
Committee.

COME AGAIN, BRO. SPRINGFIELD.

As a state of torpidity seems to possess our newly elected Press Secretary quite as much as some of his predecessors, I will offer a few remarks, trusting, however, you will gently scan my shortcomings, and look only at the motives which induced me to venture a correspondence.

Our local is having a quiet, uneventful, but prosperous career. Most of our members are in good standing, and all are working at present, though work is not very plentiful in our city. We added two new lights to our circuit last meeting night, and expect, before long, to be able to claim within our folds all the electrical workers of any consequence in our vicinity. We hold special meetings every other Wednesday night, solely for the purpose of discussing practical electrical subjects, and with the aid of a blackboard and box of crayon, a small library of electrical treatises and a few faithful, though uncompensated tutors, we return to our respective homes knowing a little more—to say the least—than when we left. I believe these discussions, besides being a great benefit, to be a success towards keeping a local on a good financial basis, by being an inducement for members to attend meetings. Many members become careless from hearing nothing but the dull routine of business meeting after meeting. They miss a few meetings, forget in a short time to pay their dues, and are eventually suspended. If asked why they dropped from the union, probably, being a little near-sighted, they will reply that they see no benefit in it. But let a local have practical discussions in which we may educate and be educated, and a member who can't see any benefit in it is just as well suspended.

I read the correspondence from different locals and consider some of them exceptionally fine, but it seems as if some Press Secretaries value too lightly their position, and when they send a letter to the "Journal" send something which is of little value to the "Journal" or to any of its readers. We may not all be scientists capable of expounding the theories of electricity, but we may, at least, when we write a letter of a few hundred words to the "Worker," refrain from filling it with slang and, as Bro. Lloyd of Washington says, "local puns and gags." What interest, I ask, has a local "pun or gag" of a Chicago or San Francisco local for a Springfield or Boston brother, or vice versa? As Bro. Lloyd has said in his August letter, "others than workers read the 'Journal,'" and we, the members of the N. B. E. W., on whom its success depends, should impress those "others" that we are as capable of writing a good, sensible, well dictated letter, as any other class of workmen in America, by making good letters the rule and not the exception in the "Worker."

I think the "Worker" might be greatly enlarged every month by those of us who possess the ability, and I know in the Brotherhood there are many sacrificing a small portion of their time writing articles, electrical and mechanical, and some of us, until we have more time to devote to our correspondence, should verify the old proverb: "Silence is golden."

GEO. T. MCGILVRAY,
Financial Secretary Local No. 7.

SOME POLITICAL POINTERS FROM THE WINDY CITY.

Some union laborers think politics should not be connected in anyway with their cause. That idea has been brought about by Arthur, of the engineers, and others of his type. When you stop to think of it all, we are working for the betterment of our condition, and any honorable way to accomplish that is to our interest. The interest of one ought to be the concern of all. Now, when we know that at least one-third of our craft is out of employment all the time, and the other two-thirds, or nearly so, are on the verge of being with the army of tramps, is it not time we should look into the conditions that caused this state of affairs? It is caused by class legislation making it possible for one set of men to corner all the finances of the nation, and thereby corner the people. The question may be asked, how is it done? It is done by the wealthy class working on the prejudices of the poorer and ignorant class through the press, which they have bought up. This has been the most direct cause. Just read the newspapers of the present time, and 95 per cent are in line with Cleveland and McKinley's policy. That alone ought to be sufficient evidence that the main issue is not the tariff, as the two men above mentioned are directly opposite on the one, and identical on the other question, and we are supposed to be Americans, and consequently it is our duty to look this matter up, so as to be able to vote intelligently. Another great trouble has been in conventions, in allowing syndicates to name candidates in all parties, and making all platforms heretofore, but they never made the one at Chicago this time, which is a true Declaration of American principles. If Abraham Lincoln were living to-day he would undoubtedly be called an Anarchist, for expressing the following, which he wrote to a friend at the close of the war:

"We may all congratulate ourselves that this cruel war is nearing an end. It has cost a vast amount of blood and treasure. The best blood of the flower of American youth has been freely offered upon our country's altar that the nation might live. It has been indeed a trying hour for the Republic. But I see in the near future a crisis approaching that unnerves me, and causes me to tremble for the safety of my country. As a result of the war corporations have been enthroned and an era of corruption in high places will follow, and the money owners of the country will endeavor to prolong its reign by working upon the prejudices of the people until all wealth has aggregated in a few hands and the Republic is destroyed. I feel at this moment more anxiety for my country's safety than ever before,

even in the midst of war. God grant that my suspicions may prove groundless." Now, brothers, look this over and see if Lincoln's prophecies are not coming true. This great man foresaw all this thirty years ago. Now we ought to be able to figure it out when we are here at the present time.

I would like to ask the brother press secretary at Washington, D. C., if he knows the exact object of a labor union, as I see he advocates more attention to electrical subjects in the "Worker." That has been the course that has pauperized us. Now look up what has caused all this, and you will find prejudice and ignorance caused it all. He says the majority of the brothers will coincide with him, while, if the truth were known, he would only find about three people, and one of them would live in Philadelphia.

Look at this man Payne, of Milwaukee, who has just caused one of the greatest strikes. That case comes under the N. B. E. W. directly. Payne is also a Republican Committeeman, with headquarters in Chicago at the present time. I think the brothers will coincide with me that it is time to quit work and look this man Payne's case up, and the party he represents. The trouble is, we have done too much work while others figured how to rob us. Now we have the opportunity to free ourselves. Will we take it?

C. D. HATT,
Chicago, Ill.

FROM PINGREE'S FARM TOWN.

Another month has rolled away, and it is time to write to our dear old "Journal" again. All the brothers are working at present.

Bro. Jack Mahoney had a painful accident. While going up a light tower some time ago, his support gave way and he fell quite a distance, but having a powerful constitution, he rapidly recovered and is at work again. His brother, Mike Mahoney, who is also in the electric business, nearly got killed two or three months ago, and he came out OK, too, and now they both believe more than ever that "God loves the Irish."

The new Detroit Telephone Co. wanted men to string wire some time ago, but as they were not paying very good wages, they could not get any first-class men, and as they want to get a large part of their work done by the first of next year, they will have to break in a lot of "ground-hogs," or else come up with wages, which, they say, they will not do.

We were much pleased with the letter in the "Journal" last month from Grand Rapids, in which they praised our Bro. Duncan B. McIntyre of No. 17 for his work in organizing a new union there, and we will say to our brothers of No. 75 that "Mac" is a man to tie to, and we sincerely hope that the beautiful umbrella they presented him with will keep not only rain, but also trouble from falling on his head.

The committee had a conference with the public lighting commission in regard to employing none but union men. They agreed on practically everything but one point: they were not agreed on the legality of forcing the men into the union, and did not wish, they said, to bind the

city to that clause, but they spoke highly of unionism as a means of keeping wages at a decent living scale, and said the men were at perfect liberty to join the union, and that they would allow no one to interfere with that privilege. Too much praise cannot be given to our president, Thos. Forbes, for his exertions in behalf of the employees of the public lighting plant.

Before we receive our September "Journal" Labor Day will have come and gone. The brave boys of No. 17 intend to make a good showing in the big parade of 15,000 organized workmen who will take part in labor's great holiday.

Those of us who were charter members of No. 17, and were personally acquainted with ex-Grand President Henry Miller, were greatly pained to hear of his death. He was generous and unselfish to a high degree. We well remember when he came to Detroit to organize us. He rode on the bumpers of a freight train to get here, as the Brotherhood was still in its infancy, and had no fund for organizing. When we took up a collection for him at the close of the meeting, we fairly had to force him to take it. "No, boys," he said, "you will need all the money you can get together for your union. I will get along some way." I tell you, brothers, he was a hero in the cause, and as I think of him I am reminded of a verse of Longfellow:

"In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle,
Be a hero in the strife."

DANIEL E. ELLSWORTH,
Press Secretary.

GIVE HIM A CHANCE.

Do all our Unions let their Press Secretary "have it" when they miss a "Journal"? If they don't, I would like them to do so. It would then be all round alike. At our last meeting—that I came to town especially to attend—I suggested that a piece in each alternate "Worker" might do, and by an arrangement of amendments to the suggestion, the Union finally instructed me to do my duty and have a piece in every time. As it is already September, I send this as a forlorn hope and take the opportunity to point out that when any Union expects its Press Secretary to keep writing what is worth reading, the members must keep doing what is worth writing about. The Press Secretary is neither a screamer nor a scape-goat.

No. 9's picnic was a success, and a dozen of our boys were there to attest the fact. We hear their treasury will benefit.

Our two brothers who started a-wheel for Detroit between the two tracks of the railroad did well for ninety miles, and the tracks parting company at that stage, they started to ride ties, but gave it up shortly; it was hard on the tires. They then went on the wagon road, but ties were better; the knocks came when expected. So they examined the country and returned along the railroad track.

Is a Union right in interesting itself with its employers in favor of individual men? I think so, and I would go as far as to say it is scarcely ever right in interesting itself with its employers to the detriment of individual men. I think it

says well both for us and one of our companies that a committee waited on them, with the result that the work of two of our trimmers was made much handier (in this case less leggy). Would we not often show a truer interest for our members and the trade if we let alone downing a man and making enemies of his friends, and took up instead something that would help a member secure his good will, to say nothing of the approval of the bosses?

This is no new doctrine. Building up will beat tearing down every time. Were I competent, I would go into the means of making operative each of the twelve clauses of Article II. of our Constitution, and show that our present methods are unworthy of our craft.

But I must get this in the mail, or it will surely be out of our next issue, and meanwhile someone please have a crack at me and uphold our present methods, so that I may have a chance to begin and build somebody up.

DUNCAN PEARCE,
Press Secretary of No. 19.

OMAHA FLASHES.

No. 22 is alive and prospering, as the city is putting in about 3,500 incandescent and a number of arc lights temporarily. It is giving all the boys in Omaha plenty of work for a short time. The lights are to be used fair week, August 27th to Sept. 5th, for the grand parades, under the auspices of the Knight of Ak-Sar-Ben. It is going to be one of the grandest affairs Nebraska has ever seen.

The Omaha C. L. U. has settled all its troubles and is prospering under its new set of officers, and to give it a helping hand we have renewed our affiliation. The different labor organizations of Omaha are taking quite an active part in subscribing for stock in the Trans-Mississippi Exposition, and are endeavoring to secure two or more members of the Board of Directors.

The Light Co. have just put in a battery of two of Heine's latest improved boilers to take the place of two boilers put in when the plant was erected, and are now busy erecting a smoke stack for the new boilers, seven feet in diameter and about 140 feet high.

The Nebraska Telephone Co. have been experimenting in laying underground cable in sand about eighteen inches deep, in place of using conduit. They found it not very satisfactory.

One of our brothers, M. T. Castor, on August 8th, while transferring wires at a plant to make room for a new smoke stack, accidentally came in contact with wires of opposite polarity which threw him on to a 1,000 volt alternating circuit, lacerating his right arm, and he will probably be laid up for several days. He is thankful it is not worse.

Bro. Otto Brayersdorfer has opened up a bicycle repair shop on North Sixteenth street and is doing well.

Bros. Roche and Dooley are still wrestling with ice machines at the Millard Hotel.

Our most popular grocer, W. R. Bennett, recently gave his clerks a trolley party, ten decorated motor cars being used. After making the rounds of the city, they adjourned to the lawn at the residence of W. R. Bennett, where refreshments were served. The lawn was

illuminated with 350 colored incandescent lights, which made a brilliant display.

Bro. Foster was recently called to his old home, Springfield, Ohio, by the death of his infant son, who, with its mother, were visiting relatives there. He is expected back in a few days and will have the sympathy of all the brothers in his bereavement. At our last meeting resolutions of sympathy were passed.

We tender our best wishes to all of our brothers out of town, and assure them we have not forgotten them, even if some of them have forgotten us.

As the weather is so cold (100 in the shade), I am afraid the pen will freeze to the paper, so will have to open circuit for the time being.

PRESS SECRETARY NO. 22. IN MEMORIAM.

Whereas, It has pleased the Allwise Creator in His infinite wisdom to take by death the beloved son of Mr. and Mrs. Jacob Foster; therefore, be it

Resolved, That the members of N. B. E. W. of A., Local No. 22, of Omaha, tender our brother our sincere sympathy and condolence; be it further

Resolved, That a copy of these resolutions be spread upon the minutes and published in our "Electrical Worker," and a copy be furnished our brother

M. J. CURRAN,
W. J. WALES,
J. W. WATTERS,
Committee.

FOREST CITY IN LINE.

We held an open meeting on August 27, and as a result we expect to get fifty members, so you see it pays to invite outsiders in once in awhile. It was reported at that open meeting that three union men from Toledo scabbed at the Brown hoisting strike. I am very sorry to hear this, but we are investigating it thoroughly, and if it be true, you will hear from us later on. I will say they were not union men if it is true.

As Labor Day is near, we are making great calculations on the flag the C. L. U. is offering for the best drilled union. At present we call it ours, but I will let you know in my next how we came out.

There is very little work going on this fall.

We were very sorry to hear of the death of our late brother, Henry Miller.

IRA MISNER,
Press Secretary.

ST. JOE ALL RIGHT.

I have been putting off writing, trying to find something to say, as there is not much work going on at present.

No. 40 has three applications for membership. That is what we like to see.

There is an electrical supply company in this city known as the St. Joseph Electric Supply Co., which is one of the best in the city, but was not a union shop. We are glad to say that No. 40 has been duly recognized and it is now a strictly union shop. Bro. Snodgrass has gone in business with this company and is meeting with good success.

The Missouri and Kansas Telephone Co. have about completed their handsome new central building, and have quite a force of men changing their old lines to an underground system.

The Board of Aldermen are having quite a time selecting a City Electrician.

We are in hopes that they will choose one of our members for the position.

We are pleased to hear of the speedy recovery of Bro. Bartlett.

No. 40 will be right in line Labor Day with a well-loaded circuit.

W. E. GORTON,
Press Secretary.

QUAKER CITY NOTES.

Bryan Not Popular With Our Brotherly Love Scribe.

At a regular meeting held August 6, 1896, Local No. 41 adopted the following resolutions:

Whereas, It has pleased the Grand Architect of the universe to remove from the scenes of his earthly labor our beloved and esteemed brother, John K. Harrison; therefore, be it

Resolved, That we deeply deplore the loss to us of a true and faithful brother electrical worker, and that we recognize in his death a loss to this order of a member whose memory we will ever cherish with affection and regard; and be it also

Resolved, That in respect to his memory, the charter be draped in mourning; and be it further

Resolved, That we extend to his bereaved family our sympathy and that a copy of these resolutions be sent to them and the same be published in the "Electrical Worker."

T. D. G. SMITH,
ALEXANDER MURRAY,
HARRY DENTON,
Committee.

He leaves behind him a wife and child. Bro. Harrison had been married but three years, and the young and bereaved wife sorrowfully mourns his loss. Bro. Harrison was in the employ of Francis Bros. & Gillette of this city, who very kindly defrayed all expenses. He was working on top of a stone wall, which gave way underneath him. He was struck in the groin during the fall by a piece of coping, and death came immediately.

Our local is in good trim after taking into consideration the many delinquents, also those who fail to attend the regular meetings. One of the first symptoms of the decline of our organization is a neglect to attend the regular meetings. An excuse that is often given is, "Oh, there is nothing of any interest going on." If this is true, brothers, whose fault is it? Permit me to tell you it is yours. Why? Because you who plead this excuse are under as many obligations as any one else to see that there is something of interest before every meeting. When every member does his duty, few meetings are held without initiations, and what is more interesting to a true and loyal brother than to see a new recruit go through our elegant initiatory rehearsal. I am ready to say that no electrical worker is excusable for his non-attendance on account of a lack of interest in the meetings until he has exhausted all his resources for something to interest himself and others. Another excuse is, "Oh, there are so few out, it is not worth while for me to go." This, brothers, is the very reason why you should go. Somebody must attend to transact business, and if others do not, there is the more need of you go-

ing. Others' shortcomings are no excuse for you. You took the solemn binding obligation for yourself and must answer for yourself.

Our ex-Vice President Bro. Broadhurst is now undergoing an operation for a rupture which he contracted some five years ago, while running heavy cable lines on a ship. Poor, big-hearted Tom is in hard luck, having buried his mother but a short time ago. He has the heartfelt sympathy of all who know him.

Brothers, we have long been in need of a good hustler outside of Bro. Neal and a few others. Our present recording secretary, W. Jac Marland, very skillfully performs this duty.

It was not my intention to get mixed up in political discussions, but how can a patriotic American citizen refrain from such open challenges as appeared in last month's "Worker?" It is certainly not a good condition of affairs for Mr. Bryan. His "crown of thorns" and "cross of gold" are about forgotten. This is not a campaign where brilliant oratory and taking figures of speech can sway the voters. The issues involved partake too much of the plain matter of fact to admit of being governed by anything like that. There are only two points involved—the tariff and the money question—and it does not require any figures of rhetoric to explain them. The tariff almost everybody understands. The object lesson of what a tariff constructed on free trade lines means, we have had most poignantly in the Cleveland administration. The voters do not have to be educated on that score. They know that if we hope to get a renewal of prosperous times, we must have a tariff of Republican making. The election of Bryan would put an end to anything like that. He is as rabid for free trade as he is for free silver. He seems to run to have everything free. I notice, by the way, that he is keeping "mum" on the tariff. Four years ago in the canvass he made for Cleveland, a tariff for revenue only was the burden of all his speeches. Why does he keep silent now? It is because he knows that if he would launch out his free trade views, the silver hobby would become lost. Astute as well as voluble is Mr. Bryan, while Mark Hanna's smile continues to grow. It is said of this distinguished individual that when he smiles things are coming his way. The other point involved is the question of the stability of currency. While more difficult of comprehension it cannot be explained by the flowery orator. Col. Bob Ingersoll is, without a doubt, the most brilliant and fascinating speech-maker of the day, and yet few believe in what he asserts. The money problem can be made understandable by the plainest language only. Sherman and Tom Reed, in their speeches, understood this. I imagine Harrison, when he speaks next week, will be even plainer spoken than either Sherman or Reed. No man knows better how to clearly state facts. I always think of Col. Bob Ingersoll when I read one of Bryan's efforts; each have an enchanting way of putting things, and Ingersoll's figures of speech in his attacks on the Bible impress me very much with having the same depth of reasoning as have Bryan's scintillations in favor of

free silver. Neither succeeds in bringing you from a position of doubt if such be your position, and as it is with Ingersoll with regard to religion, so it is with Bryan in the matter of his advocacy of free silver—that is, to keep the people doubting. I am extremely sorry that such a man should be compared in any way with that noble, never-to-be-forgotten soldier and statesman, Abraham Lincoln, whose memory we will ever cherish.

D. S. LOCHER,
Press Secretary.

44 IN LINE.

Bro. Nat Roe, who was recently elected inspector, has gone to Syracuse. Neither Nat nor his "hundt" was ever "fresh," and we hope he won't stay too long in Saltville.

Bro., or rather Vice President James Bennett would like the address of Mr. W. V. Lockwood, who was out in California about a year ago. If any of our Western brothers know his present address, they will confer a great favor by sending it here.

Bro. Harry Pearce has the heartfelt sympathy of the entire Local in the death of his wife, which occurred on June 26th. Mrs. Pearce had been an invalid for quite a long time.

We are raising a fund to buy a banner and hope to have it ready to carry on Labor Day. If all the boys would come up with their share, we can have as fine a banner as any labor organization in Rochester. We haven't got it yet, but No. 44 hasn't "felled down" on anything she has ever started yet, so I expect to tell you all about it in my next letter.

FREDERICK FISH,
Press Secretary.

BLOOMINGTON NOTES.

No. 49 will give a picnic next Sunday, and we will undoubtedly have a fine time if the weather permits.

We are also making arrangements for Labor Day, and expect to make an impression on that day, such as electrical workers generally do.

Bro. Geo. Butler has accepted a position with the Fire Department, and has charge of the fire alarm system, but still retains his membership in No. 49. George is all right, as he is a good fireman as well as a good lineman.

Bro. Gorey, who was, until recently, inspector for the Home Telephone Co., has accepted a position with McGregor & Waddington, plumbers and electrical contractors.

In regard to politics, I have nothing to say, as I do not know the sentiments of any of our boys, and as for myself, I have not given the subject a great deal of thought, but I lean toward the gold standard. I will probably write more on the subject later.

The following lines were given to me by an "electrical tourist" as a compliment to our city:

MY SOLILOQUY.

In the twilight of the evening,

When the sun is making low,

I will often think and ponder

As on through life I go—

Of a bummy little city

On the "rocky" C. & A.,

Where the first time in my life

I was taken for a "Jay."

There you'll find a "Central Office"—

The ventilation is not good;

You will need a pick and shovel

To find the floor made of wood;

On the door is placed this legend—

"To him who here knocks,

If you want a job around here

You must carry a chocolate box."

E. E. HIGGINS,
Press Secretary.

MAIL FROM THE SAINTS.

Once more I have the pleasure of writing a few lines for the "Worker." I am very sorry to state that the boys here do not take the interest in the union that they should. I did not know when I wrote the last letter to the "Worker" how some of them stood, but I find that about half of our members are so far behind in their dues that their names have been erased from the books. The rest of the boys that are in good standing are doing all they can to keep the order running. I think that it would be a good thing for No. 57 to have a visit from a member of the Executive Board. I would have a tendency to bring the boys together again.

I want to tell you about a fellow named Sam Sorenson. He was working for the Salt Lake and Ogden Gas and Electric Light Co., and left here about the 20th of August. He beat his land lady out of about \$30 and beat one of the boys out of about \$28 for a suit of clothes that he went good for. In fact he beat everybody that he could. He drew about \$130 on the 15th of this month.

He stands about five feet five or six inches high, and has a little mustach and light curly hair, and is on to the grip and other signs of the Brotherhood. It is understood that he went to California. If Bert Francis should see this we hope that he will take good care of the Swede if he comes where he is.

N. MATTHEWS,
Press Secretary.

JOTTINGS FROM THE ALAMO.

News items in our line of business are very scarce in this part of the globe just now, although work is picking up a little.

We were all glad to welcome back Bro. Hall and his gang, who have been away for some time.

The S. W. Telephone Co. are rebuilding avenue C, setting all fifty-foot poles. They are also building a line to West End.

Bro. John Lindquist was last heard from in Denver, Colo. It is rumored that he has gone to develop some of his many silver mines, and as he is a 16 t 1 man, we sincerely hope they will pay out good.

Bro. Alvin Ellis has been appointed toll line inspector for the S. W. Telephone Co., with headquarters at Austin. Guess our nine will lose their grip, now that they have lost their catcher.

Bro. James Parsons had a very painful accident a few days ago, falling from a ladder and spraining his left wrist.

Bro. P. E. O'Hara is about the only contractor who has anything to do now. He has three pretty large jobs on hand—Menger Hotel, Hicks Building and the new Courthouse.

They are putting in a small plant here at Fort Sam Houston for lighting the

post. I think most of the work is being done by soldiers. B. Dubinski, one of our contractors, has the making of the switchboard.

Bro. Martin Wright will leave in a few days to install a plant at Kline, Tex. Better wait until after Labor Day, Mart.

No. 60 has the honor of having Bro. Louis Hall elected grand marshal of the Labor Day celebration and parade. We think the Trades Council could not have done better than in selecting Bro. Hall, and to say that we are proud of the honor is putting it too lightly.

Ex-Bro. Kinney has returned from his wedding trip to Washington, D. C., and has settled down to married life just like an old timer. Although he has left our ranks, yet he has the best wishes of every member of No. 60.

Bro. J. F. Wellage, our worthy treasurer, beat the record of the Pacific Coast champion by exactly two seconds in the pole climbing contest at our picnic last month, going up and down a 45-foot pole in exactly fourteen seconds.

Bro. Maloney, who had his arm broken some time ago, has almost recovered.

Bro. Hendricks says he has given up the chicken raising business. I guess he will manufacture incubators.

Bro. Spangle, who handles the juice for the West End Street Car Co., had his hand very badly burned a few days ago. While soldering on an ear, he came in contact with a grounded span wire. Some farmer, in guying the pole, had fastened the guy wire around the span wire and direct to an iron lug sunk in the ground. It is a wonder to me that more linemen have not been hurt in this city, as 99 out of every 100 span wires are red hot; also a large number of the guy wires are dead grounds.

At the last meeting of our City Fathers a franchise was granted for a new electric light plant. Mr. Weiss, who is the president of the S. A. Street Railway Co., is at the head of the concern, which is under bond to begin work in ninety days, so I suppose they mean business.

W. M. GRAHAM,
Press Secretary.

QUINCY DOINGS.

Here we are again with the good of the N. B. E. W. at heart, and especially Local Union No. 67. At our last meeting we installed a new light, and have another for next meeting. There are still a few lights that should be shining bright in our circuit, but for some cause hold back.

Bro. A. B. Otis has been working for the T. H. L. & P. Co. We won't cut ice Labor Day, but will cut a swell and no mistake. No. 67 expects to turn out to a man, and try to do the day justice and let the people see what we are doing.

Bro. H. Kane was in attendance at our last meeting. He came in from near Springfield, Ill., where he has been working on a toll line for the Bell Telephone Company. He was gone a long time, but came in with enough "free silver" to square himself on the books, and had some left.

Bro. Ed Gillinger has been on the sick list, but is out again with punch and ladder looking as fresh as though his contacts had fresh solder.

Bro. W. F. Wagner is about to complete the largest job of inside work in

the city, that of J. Stern & Sons' new building.

The hot weather is hard on the boys, but none have been prostrated that we heard of.

Bro. D. M. Mallinson has his men doing some construction work. He has twenty new street lamps to put up, but the boys know how "it's done," and so the work goes on.

People here are asking for union men to do their wire work, and we insist on them being more particular about this matter. Ask for up-to-date cards. That's what talks.

Just a word to some of the brothers about being absent. I am afraid some of us are too careless about being present at roll call. It is a great help to you to be present. It not only enlightens you, but is encouraging to the rest of us. Don't miss a meeting and after awhile you wouldn't stay away on any account. We have a nice little hall, well seated and lighted, fans for hot nights, and a stove for cold ones, so don't stay away. We have very interesting speaking, and some fine songs by Bro. James Dolan, who also looks after the blackboard and sees it is always in place.

C. H. McNEMEE,
Press Secretary.

PICNIC AND FREE SILVER AMONG THE "INDIANS."

No. 73 is again on deck and every light burning brightly.

Our picnic was a success in every sense of the word, but financially we came out about even. My prediction about Big Bob (Bro. Young) was all OK. Here is the result of the contests:

First contest; first prize, \$7; second prize, \$3; pole, 55 feet high; quickest time to top of pole and down to the ground; necessary to strike spur into the pole within three feet of the ground coming down—First prize, Bro. L. McGuire; time, 17½ seconds; second prize, Bro. C. Millspaugh; time, 18½ seconds; Bro. P. Sandberg was third in 20 seconds. Bro. R. Kolb took 27 seconds to do the job.

Second contest; cross-arming; putting on one cross-arm, cutting gale and screwing bolts home; 35-foot pole; first prize, \$3; second prize, \$2. Bro. R. Young (Big Bob) made it in 1:55. Bro. Sandberg in 3:17. Bro. Berggran in 3:43.

Third contest, throwing hand line over high wire; necessary to win: The greatest distance from a perpendicular line under the wire to farthest coil of the rope; first prize, electrical workers' emblem. Bro. L. McGuire won the button, throwing the rope 43 feet 10 inches; Bro. Thielman, 36 feet 11 inches; Bro. H. Palmer, 30 feet 5 inches; C. Millspaugh, 28 feet 4 inches; J. Hannaphin, 31 feet; Mr. Desmond, 28 feet 4 inches; Bro. Young, 26 feet 9 inches; Bro. McEnroe, 22 feet 2 inches; Bro. Pagel, 20 feet; Bro. Berggran, 15 feet 10 inches.

Fourth contest, line climbing, three 35-foot poles, 100 feet apart; first prize, pair spurs; second prize, electrical workers' emblem. Bro. R. Young (Big Bob) won first prize in 1 minute and 46 seconds; C. Millspaugh won second prize in 1:51; Bro. Sandberg, third, 2:02½; Bro. Berggran, fourth, 2:07½.

I do not know what the best record is for this kind of a job, but the "Spokes-

man Review" says it is over 1:40 on 30-foot poles. If that is the case, we came very near breaking the record. All the boys enjoyed the picnic very much, and no one was out of his place, and every man went home sober after a long day's (and night's) fun. Well, they all had so much fun that few of them cared to work next day.

The city of Spokane has ordered 48 new arc lights to be up and turned on by September 7, and with only five men in the gang, you may imagine how busy we are until after the first, especially when I tell you that there are several miles of arc wire to string, some of it on very heavy leads, and quite a number of 50 and 55-foot poles to set. All of our boys are working as far as heard from, and one or two outsiders, whom we will take into the fold as soon as we find out that they are worthy.

I see Bro. Chas. Hatt of No. 9 is very sound, mentally, especially on the financial question. Give it to 'em, Charley. They all need it in that country. Now, in this town, the gold bugs are in the minority. In fact, there are not enough to disturb our minds in the least. The gold party in the State of Washington puts me in mind of the Irishman's mud turtle. Two Irishmen were working in the timber together. One evening, on their way home, they met a mud turtle in the road, which Pat proceeded to dissect with his ax, cutting him in two both ways. On their return to work in the morning, Mike noticed one piece of the turtle moving, from the contraction of the muscles, when he exclaimed, "Pat, Pat, he is alive yet." "Oh, no; he's dead enough," replied Pat. "Oh, Pat, he's alive. See how he moves." "Oh, he's dead, all right enough, but he don't know it yet." So it is with the gold party in Washington. "They're dead, but they don't know it." Silver arguments are all lost in No. 73. We are worse than 16 to 1, we are 16 to 0.

T. T. KILBURY,
Press Secretary.

FALL RIVER ITEMS.

I wish to say through the "Journal" that the last press secretary Local No. 74 had, has been lost or stolen. We cannot even get his description, so as to have him returned.

Local No. 74 is up to date as well as other locals. Since our last election a number of new men are in office, with W. I. White in the chair. All the brothers think it is the best thing ever happened for No. 74. This local has been run rocky up to date, although it is on an honest basis now, and, more than that, we intend to stay so.

We only have one brother out of work. His name is James Murphy, better known as Duffy. He can be found on the corner in front of Postal office, from 6 a. m. to 12 p. m.

There are a few men here who call themselves linemen. They may be, but they are not brothers, nor will they be until Bro. Bailey figures up their back dues. Then they might get a pleasant look, which they are not getting now.

The Telephone's ex-foreman and ex-member of No. 74 is playing a very hard game of late. He has been doing a little door-mat work, but I think the firm went up. No. 74 has him grounded

heavy. It will only be a matter of time when more of the ex-brothers get the dose. It is already mixed for one or two.

L. G. NEFF,
Press Secretary.

SAGINAW.

This city is assuming an electrical attitude of no small dimension, and the members of No. 78 are in no way sorry that such is the case, save perhaps a few of the boys who are non-union.

The Inter-Urban is now completed, and last Saturday did as it promised some time ago—ran its first car from Saginaw to Bay City, August 1st, 1896. It is a finely equipped road, having already five elegantly appointed vestibuled coaches, with more to follow within a short time. The large and convenient repair shops and power rooms of the Inter-Urban are located at Carrolton, a point about three and one-half miles distant from Saginaw.

No. 78 is just now busy arranging for Labor Day and for the annual ball, which follows shortly after. Two new lamps have been added to the circuit with prospects of more; which, together with the fact that the old ones are still burning brightly, is conducive to the serenity of all concerned, except the janitor.

Accompanying this short letter the writer sends a paper on Unionism, which, by the kindness of the editor, will be found elsewhere.

Perhaps one of the luckiest accidents (if I may be allowed to so express myself) occurred in the yards of the Wick's boiler plant, this city, a few days ago. Wm. Byrnes, while assisting in raising a gin-pole, became tangled in one of the power circuits of the Swift Electric Light Co., and by means of a guy wire, one end of which he held in his hands, short circuited the machine nearly 1,000 volts passing through his body. As luck happened, Bro. Ross, who is ever at his post of duty, and who is dynamo tender at the Swift's works, noticed that there was some trouble, and stretching forth his ready right arm, he grasped the switch firmly and, by opening the circuit, unknowingly at the time, saved a human life. Quickly communicating the condition of things to Bro. James Niven, who has charge of the Swift's interest, under manager Brintnall, it was but a few minutes before lineman Bro. Strachan had located the trouble and was carrying "electrical burns" and Wm. Byrnes down the gin-pole and to the office of Dr. Rowe.

GEO. S. CRABBE, Press Secretary.

GO'S ITINERANT PRESS SECRETARY.

As the "Worker" is about to go to press and nothing has come in from Houston, I was asked by Bro. Kelly to write a few lines in behalf of No. 66. I can't say much for her, as I have not heard from any of the boys for some time. However, I will let the rest of the Locals know that Houston still has a Union. The lights are all the same, there being none in the city that are not in our Grand Circuit. It is saying a whole lot when you can say that you have all electrical workers in the city in the Union, but it is a fact.

I do not know why the new knight of the pen for Houston does not make him-

self known by sending something to the "Worker." It has been two months since I left there, and nothing has appeared from him yet. I am sure No. 66 has elected a new one by this time, to fill the place vacated by me. It is with pleasure, however, that I have the honor of inserting a piece in our noble paper, with my autograph at the end.

Well, boys, there is not much news in this city at present. Everything is very dull, and several of the boys are out of work. There are men coming in from all parts of the country. There are several large jobs going up here, but there are men enough to eat them.

Boys, whenever there is a crowd assembled in the office, you should see Bro. Kelly test the circuit to see how many there are for free silver. Oh, he is dead out to the goldbugs, and don't you forget it.

Well, I have heard of a job, and must get out and round it up.

G. D. CROSSLEY, Press Secy.

HENRY MILLER.

While in Washington, I was rooming at the same place where Henry Miller, together with A. McMahon, Dick Howard, Will Gegis and Jim Edward, were rooming. He was the foreman for the Potomac Light and Power Company, and told me when I left that he would soon send for me, as he had a big job in sight, as they were going to build down into the city of Washington. The company is located in old Georgetown, and owns five power houses, which they bought, and abandoned three of them. They furnish power to all the electrical railroads in that end of the city, and supply one in Virginia, going to Fort Meyer.

I saw Henry Miller wire an iron smokestack, built by the Cramps of Philadelphia, 240 feet high, working on the outer edge on a narrow scaffolding. The sway of the iron by the wind was nearly three feet. Nearly every stormy night last winter he would have to go out on the circuit, as it was put up in trees, and had defective insulation. One night, especially, he found a barbed wire fence charged for miles around from an arc wire which had fallen across it. The lines were run in Woodly, or Cleveland Park, where John Sherman and Cleveland live. They are supposed to have been stockholders in the plant.

Henry Miller's mother came from the Swiss Republic, the land that held the lamp of liberty burning for five hundred years before the great nation in the New World adopted it. His father came from Germany, the home of the Knights-Errent of Chivalry, whom Pope Leo commissioned to go to the Holy Land to rescue the tomb of the Christian Saviour, and whose pilgrimage in the land that turned the Roman Empire upside down gives the class day orator something to speak about, and furnished a royal house to England. They crossed the river Rhine in marriage, they crossed the ocean in emigration, and landed on the chivalric plains of Texas, where Henry Miller was born. Tutored in the telegraph by the Government, like Buffalo Bill, he felt like doing something for this land of liberty.

Physically, he was six feet tall, 42 inches around the chest, and had a 7½-

inch brain. He could do as much work in one day as two ordinary men, and read novels half the night. In other words, he could do as much work in fun as some people could do in earnest. He had a heart as big as a coat of mail. His efforts in behalf of the electrical workers created a momentum around which a corporate resistance occurred. He was the loser. Peace be to his ashes.

HENRY HATT.

Sheboygan, Wis.

PECULIAR CASE OF LOSS OF MEMORY.

Last winter W. E. Higgins dropped in to St. Louis, the same as hundreds of linemen do in the course of a year. He secured work with the Missouri Electric Light and Power Co., and in due time was admitted to membership in the Union. He was well liked by the boys, and all were surprised a few days ago when his father came to St. Louis looking for his lost son, and learned his story. According to the father's story, his son was working at Elmira, Ohio, when a fellow-workman dropped an insulator from a pole, which struck him on the head, causing confusion of the brain. He was taken to his home at Sandusky for treatment, but suddenly stole away from home nearly a year ago, since which time his father has traveled over the greater part of the country and spent about \$500 searching for him. John Haley, a member of No. 1, started East several weeks ago and secured work at Youngstown, O. While in that city a fellow-workman mentioned the case of Higgins, and how his father was searching all over the country for him. Bro. Haley stated that he had worked with a man named W. E. Higgins in St. Louis. This fact was communicated to the elder Higgins, who immediately came to St. Louis in search of his son. When he arrived in St. Louis he had but little trouble in locating his boy, but the latter did not recognize him, and everything in his life previous to the time he was struck by the insulator was a blank. However, his father persuaded him to accompany him home and see his mother and brothers, but he did not remember any of them, nor had he any knowledge of his surroundings or of anything that occurred previous to eleven months ago. The doctors explain the case as being caused by pressure on the brain, and if this pressure is removed by an operation, he will remember all his past life again.

Helena, Mont., June 27, 1896.

Messrs. Hamilton, Carhartt & Co., Detroit, Mich.;

Gentlemen: We are in receipt of your favor of the 23d inst., with inclosures. You will have noticed the increased demand for your goods in this section of the country by our orders, and we are now at work making up list for our fall wants for our Helena and Butte stores.

We never had a line that gives more general satisfaction to the railroad men, mechanics and laborers than your clothing, and no trouble in selling them.

Wishing you the success you so well deserve, we are,

Yours truly,

GANS & KLEIN.

Directory of Local Unions.

(Secretaries will please furnish the necessary information to make this directory complete. Note that the time and place of meeting, the name of the President, the names and addresses of the Recording and Financial Secretaries are required.)

No. 1, St. Louis, Mo.—Meets every Tuesday at s. e. cor. 21st and Franklin avenue. F. P. Kinsley, Pres., 1801 Morgan st.; W. S. Peebles, R. S., 5147 Wells ave.; J. P. Casey, F. S., 2702 Spring av.

No. 2, Milwaukee, Wis.—Meets 1st and 3d Saturdays at n. w. cor. 3d and Prairie sts., 3d floor. M. J. Quirk, Pres., 87 27th st.; J. W. Peterson, R. S., 450 9th st.; Geo. Poehlman, F. S., 647 24½ st.

No. 3, Denver, Col.—E. L. Layne, Pres., 1011 19th st.; Geo. P. Manning, Sec., 1633 Lawrence st.

No. 4, New Orleans, La.—Meets 1st and 3d Tuesdays at Carondelet and Perdido sts. J. McGregor, Pres., 2111 Rousseau st.; C. M. Hale, R. S., 630 St. Mary st.; R. B. Joyce, F. S., 331 S. Bassin st.

No. 5, New York City, N. Y.—Meets every Thursday at 85 E. 4th st. John F. Bergeu, Pres., 528 Henry st., Brooklyn; R. J. Baker, R. S., 98 Henry st., Brooklyn; M. E. Bergeu, F. S., 515 Henry st., Brooklyn.

No. 6, San Francisco, Cal.—Meets 2d and 4th Wednesdays at Forester's Hall, 20 Eddy st. D. Keefe, Pres., 318½ Clementina st.; R. P. Gale, R. S., 1004 Larkin st.; A. F. Irwin, F. S., 425 Geary st.

No. 7, Springfield, Mass.—Meets 1st and 3d Wednesdays at room 30, Theatre Bldg. Wm. Gregg, Pres., 138 Patton st.; Jos. McGilvray, R. S., 190 Chestnut st.; G. T. McGilvray, F. S., City Hotel.

No. 8, Toledo, O.—Meets every Tuesday at Friendship Hall, cor. Jefferson and Summit sts. P. Crowley, Pres., 512 Vance st.; Jas. Burns, R. S., 1218 Broadway; W. Welsh, F. S., 1907 Cherry st.

No. 9, Chicago, Ill.—Meets every Saturday at 184 E. Madison st. C. D. Hatt, Pres., 5930 State st.; L. Christenson, R. S., 1043 Irving ave.; C. W. Beach, F. S., 391 N. State st.

No. 10, Indianapolis, Ind.—Meets 1st and 3d Mouday at 29½ W. Pearl st. John Berry, Pres., care of headquarters Fire Dept. E. Busselle, R. S., 80 W. Ohio st.; E. C. Hartung, F. S., Rooms 5-7 Cyclorama Bldg.

No. 11, Terre Haute, Ind.—Meets 2d and 4th Tuesdays at 8th and Main sts. C. D. Updegraff, Pres., 529 S. Ninth st.; M. Davis, R. S., 918 N. 9th st.; W. H. Schaffer, F. S., 114 N. 14th st.

No. 12, Evansville, Ind.—Meets every Tuesday at cor. 3rd and Sycamore st. Harry Fisher, res., 200 Clark st.; A. L. Swanson, R. S., 1054 Water st.; A. N. Grant, F. S., 202 Clark st.

No. 14, Memphis, Tenn.—Chas. E. Blake, Pres., 70 Mulberry st.; J. A. Myles, Sec., 207 De Soto st.

No. 15, Philadelphia, Pa.—Meets every Tuesday at 711 Spring Garden st. E. G. Boyle, Pres., Penn. Farmers' Hotel, 3d and Callowhill sts.; E. Heuinessy, R. S., 1518 French st.; Chas. T. Lang, F. S., 829 Race st.

No. 16, Lynn, Mass.—Meet at General Electric Band Room, 9½ South st. Jas. Robson, Pres., 46 W. Neptune st.; C. W. Perkins, R. S., 6 Allen's Court; E. J. Malloy, F. S., 86 Cottage st.

No. 17, Detroit, Mich.—Meets 1st and 3d Thursdays at Trades Council Hall, 224 Randolph st. T. H. Forbes, Pres., 1104 13th st.; F. Campbell, R. S., 405 Abbott st.; J. G. Forbes, F. S., 745 Milwaukee av. W.

No. 18, Kansas City, Mo.—Meets every Friday at 1015 Walnut st. C. H. Adams, Pres., 612 Wall st.; T. W. Murphy, R. S., 716 Delaware st.; J. H. Lynn, F. S., 1632 Jefferson st.

No. 19, Chicago, Ill.—Meets 1st and 3d Tuesdays at 6512 Cottage Grove av. F. Conklin, Pres., 7022 S. Chicago av.; T. J. Prendergast, R. S., 7119 S. Chicago av.; J. Drouim, F. S., 9132 S. Chicago av.

No. 21, Wheeling, W. Va.—Meets 1st and 3d Tuesdays at Trades Assembly Hall. H. F. Wyse, Pres., Box 111; C. L. Ullery, R. S., Box 111; W. J. Clark, F. S., McClure House.

No. 22, Omaha, Neb.—Meets every Friday at Labor Temple, 17 Douglas st. J. W. Watters, Pres., 2211 Pierce st.; M. J. Curran, R. S., 1814 St. Mary's av.; W. J. Wales, F. S., 1614 Capital av.

No. 23, St. Paul, Minn.—Meets 2d and 4th Fridays at Labor Hall, 3rd and Wabasha sts. Jno. O'Donnell, Pres., 4th and Wabasha sts.; Thos. O'Toole, R. S., 333 E. 6th st.; F. Volk, F. S., 175 W. 6th st.

No. 24, Minneapolis, Minn.—Meets 1st and 3d Wednesdays at 34 and 36 6th st. S. Geo. Heilig, Pres., 18 9th st.; L. R. Stevens, R. S., 18 Western av.; A. Aune, F. S., 3129 Longfellow av.

No. 25, Duluth, Minn.—Meets 2d and 4th Thursdays at room 6 Banning Bldg. J. D. Hayes, Pres., care of Crowley Elect. Co.; Geo. O'Neil, R. S., 29 Lake av. N.; Jas. F. Owens, F. S., 414 E. 1st st.

No. 26, Washington, D. C.—Meets every Friday at 827 7th st. N. W. M. O. Spring, Pres., 478 Central Power Station; S. M. Wilder, R. S., 514 3d st. N. W.; R. F. Metzger, F. S., 509 11th st. N. W.

No. 27, Baltimore, Md.—Meets every Monday at Hall, cor. Fayette and Park avs. P. H. Wissing, Pres., 741 W. Fayette st.; M. V. Wright, R. S., 1427 Asquith st.; F. H. Russell, F. S., 1408 Asquith st.

No. 28, Louisville, Ky.—Meets 1st and 3d Tuesdays at Beck Hall, 1st st. near Jefferson Calvin Beach, Pres., 1020 W. Market st.; Ed. Herpt, R. S., 607 Magnolia st.; Jno. C. Deibel, F. S., 418 15th st.

No. 29, Atlanta, Ga.—Meets every Sunday at 61½ Alabama st. Geo. Foster, Pres., 100 Walker st.; D. J. Kerr, R. S., 114 Richardson st.; Geo. Raymer, F. S., 121 Rhodes st.

No. 30, Cincinnati, O.—Meets 1st and 3d Mondays at 136 E. Court st. W. Williams, Pres., 605 Broadway; H. C. Genrich, R. S., 403 E. 3rd st.; J. F. Harmuth, F. S., 2158 Vernon st., Clifton Heights.

No. 31, Jersey City, N. J.—Meets 2d and 4th Thursdays at 116 Newark av. Thos. Watson, Pres., 513 Jersey av.; F. J. Anderson, R. S., 73 Sussex st.; T. L. Jones, F. S., 36 Wayne st.

No. 32, Paterson, N. J.—Meets 1st and 3d Mondays at German Union Hall. J. F. Colvin, Pres., 963 Madison av.; Jos. Maher, R. S., 348 Grand st.; Paterson Heights, Paterson, N. J.; John Kane, F. S., 274 Hamilton av.

No. 33, Newark, N. J.—Meets every Monday evening at No. 58 Williams st. W. J. Curtis, Pres., 12 Beach st.; J. M. Eder, R. S., 180 Market st.; W. E. Rosseter, F. S., 175 Sherman av.

No. 34, Brooklyn, N. Y.—Meets 2d and 4th Fridays at Peters' Hall, 360 Fulton st. E. W. Latham, Pres., 151 Gates av.; G. M. Leggett, R. S., 281 Adelphi st.; G. C. Paine, F. S., 151 Gates av.

No. 35, Boston, Mass.—Meets 1st and 3d Wednesdays at Well's Memorial Hall, 987 Washington st. M. Birmingham, Pres., 69 Dustin st.; Allston; E. Colvin, R. S., 258 Lincoln st.; Allston; R. H. Bradford, F. S., 6 Temple st.

No. 36, Sacramento, Cal.—Walter Ross, Pres., 1030 G st.; R. A. Fisk, R. S., 1324 3d st.; Gus. Flanagan, F. S., 1930 K st.

No. 37, Hartford, Conn.—Meets 1st and 3d Fridays at Central Union Labor Hall, 11 Central Row. M. F. Owens, Pres., 63 Hawthorne st.; D. F. Cronin, R. S., 49 Windsor st.; C. E. Byrne, F. S., 16 John st.

No. 38, Cleveland, O.—Meets every Thursday at Room 10, 158 Superior st. C. A. Hayes, Pres., Lake Shore House, B. F. Murrin, R. S., 228 Waverly av.; J. E. Suloff, F. S., 28 Norton st.

No. 39, Providence, R. I.—Meets 1st and 3d Mondays at Phoenix Bldg, 157 Westminster st. H. B. Kelly, Pres., 1950 Westminster st.; M. L. Carder, R. S., 40 Wilson st.; G. D. Higgins, F. S., 8 Carpenter st.

No. 40, St. Joseph, Mo.—Meets every Monday at north-west corner 8th and Locust sts. "Brockaw's Hall." R. M. Martin, Pres., 1702 N. 3d st.; Wm. Dorsel, R. S., 1708 Calhoun st.; J. C. Schneider, F. S., 808 S. 5th st.

No. 41, Philadelphia, Pa.—Meets every Thursday at n. e. cor. 8th and Callowhill sts.; Geo. A. Neal, Pres., 3626 Wharton st.; W. Jac Marland, R. S., n. e. cor. 8th and Callowhill sts.; W. C. Fisher, F. S., 2854 Park av.

No. 42, Utica, N. Y.—Meets 2d and 4th Tuesdays at room 5, Western Union Bldg. J. S. Ward, Pres., room 5, Western Union Bldg.; F. S. Allen, R. S., room 5, Western Union Bldg.; C. Richardson, F. S., room 5, Western Union Bldg.

No. 43, Dayton, O.—J. J. McCarty, Pres., care of Fifth St. R. Co.; L. O. Williams, R. S., 1135 W. 3d st.; F. DeWitt, F. S., 420 E. 2d st.

No. 44, Rochester, N. Y.—J. C. Guerinet, Pres., 120 Campbell st.; H. W. Sherman, R. S., 1 Bauer pl.; Fred Fish, F. S., 123 State st.

No. 45, Buffalo, N. Y.—Meets 1st and 3d Saturdays at 512 Washington st. Frank Hopkins, Pres., 81 Swan st.; J. O'Connell, R. S., 614 Fargo av.; C. E. Stinson, F. S., 21 Terrace st.

No. 46, Reading, Pa.—Lucian Bowman, Pres.; Harry Weidner, R. S., 225 Pearl st.; W. S. Hoffman, F. S., 109 Peach st.

No. 48, Ft. Wayne, Ind.—Chas. Moore, Pres., 10 Clinton st.; P. Lyckholm, R. S., G. B. Taylor, F. S., 31 Douglas av.

No. 49, Bloomington, Ill.—Meets 2d and 4th Mondays at Trades Assembly Hall. C. F. Snyder, Pres., Box 1015; W. C. Gorey, R. S., 409 S. Lee st.; W. F. Witty, F. S., 533 N. Main st.

No. 51, Scranton, Pa.—Jas. Harding, Pres., 601 Meridian st.; P. Campbell, R. S., 1210 Irving av.; Ruben Robins, F. S., 1223 Hampton st.

No. 52, Wilkesbarre, Pa.—W. B. Cee, Pres., 141 N. River st.; W. F. Barber, R. S., 415 Wyoming av.; W. Pittston, Pa.; B. M. Lewis, F. S., American Tel. and Tel. Co.

No. 53, Harrisburg, Pa.—C. A. Swager, Pres., 115½ Market st.; Jas. Emminger, R. S., 25 N. 15th st.; C. Anderson, F. S., 46 Summit st.

No. 54, Peoria, Ill.—Meets 1st and 3d Wednesdays at 301 Main st. H. Scheerer, Pres., 219 W. Jefferson st.; Harry Dunn, R. S., East Peoria; L. C. Crawley, F. S., 115 Washington st.

No. 57, Salt Lake City, Utah.—Meets 2d and 4th Wednesdays. R. Blayr, Pres., 224 W. 1st South st.; John Poland, R. S., 224 W. 1st South st.; E. Mill, F. S., 15 W. 1st South st.

No. 58, West Superior, Wis.—Meets 1st and 3d Wednesdays at rooms 3 and 4 1602 3d st. R. F. Pfeiffer, Pres., Superior Water, Light & Power Co.; G. C. Iehl, R. S., 405 Hughitt av.; H. Burdette, F. S., 1819 Banks av.

No. 59, Paducah, Ky.—J. B. Eretts, Pres., No. 2 Engine House; W. S. Nelson, R. S., 220 S. 4th st.; W. A. Koenenman, F. S., 220 S. 4th st.

No. 60, San Antonio, Tex.—Meets 1st and 3d Saturdays, Meyers' Hall, Alamo Plaza. T. L. Rose, Pres., 215 Powder-house st.; E. Kuhlman, R. S., 222 Salina st.; C. A. Davis, F. S., 215 Travis st.

No. 61, Los Angeles, Cal.—Wm. Tubman, Pres. Station 5; Chas. Viall, R. S., Station 5; E. A. Olds, F. S., 1961 Estrella av.

No. 62, Kalamazoo, Mich.—A. D. Ayres, Pres., 534 S. Burdick st.; L. Bellman, R. S., 540 Pine st.; G. E. Tift, F. S., 1022 N. Park av.

No. 63, Tampa, Fla.—Theo. Glinn, Pres., Pt. Tampa City; W. F. Crofts, R. S., lock box 264; Arthur D. Henry, F. S., box 220.

No. 66, Houston, Tex.—Meets every Monday. J. W. Howard, Pres., 1713 Houston av.; S. T. Sikes, R. S., 808 McKee st.; F. A. Peters, F. S., 705 Preston av.

No. 67, Quincy, Ill.—D. M. Mallinson, Pres., 1120 Vine st.; S. L. Pevehouse, R. S., 1413 Spring st.; W. F. Wagner, F. S., 1141 Chestnut st.

No. 68, Little Rock, Ark.—C. J. Griffith, Pres., 15th and Rooker st.; G. W. Wilson, R. S., 826 Marshall st.; W. N. Drogoun, F. S., 1622 W. 3d st.

No. 69, Dallas, Tex.—W. B. Courtney, Pres., 568 Commerce st.; F. G. Montgomery, Sec., 494 Collins st.

No. 70, Schenectady, N. Y.—Meets 2d and 4th Tuesdays at Trades Assembly Hall, cor. Centre and State sts. F. Litzendorf, Pres., Crane st.; M. Pleasant, Geo. Miller, R. S., 32 Ellis st.; J. D. Betting, F. S., 626 Villa road.

No. 71, Galveston, Tex.—Meets 2d and 4th Wednesdays. Oliver Lorenzo, Pres., 166 Tremont st.; D. L. Goble, R. S., 3320 Ave. K½; L. C. Castetter, F. S., 2222 Postoffice st.

No. 72, Danville, Ill.—C. M. Girtou, Pres., 319 Franklin st.; Jas. Merritt, Sec., care of Am. Tel. & Tel. Co.

No. 73, Spokane, Wash.—Meets 1st and 3d Thursdays at Oliver Hall, 336½ Riverside av. C. C. Van Inwegen, Pres., 1504 Boon av.; T. H. Deuter, R. S., box 635; D. G. How, F. S., 0417 Monroe st.

No. 74, Fall River, Mass.—Meets every Monday at cor. Main and Bedford sts. W. I. White, Pres., 59 Bowen st.; Jas. Murphy, R. S., 100 4th st.; Thos. Bailey, F. S., 135 Snell st.

No. 75, Grand Rapids, Mich.—Meets 1st and 3d Fridays. J. McGoran, Pres.; Ed. Cannon, R. S., Clarendon Hotel; Geo. Higgins, F. S., 63 Pleasant st.

No. 78, Saginaw, Mich.—Jas. Hodgins, Pres., 1309 Jaues st.; Robt. Crawford, R. S., 145 Gage st.; Chas. Ross, F. S., P. O. box 225, E. S.

No. 79, Austin, Tex.—Meets every Thursday night at Maccabee Hall. J. L. Vorkafer, Pres., 1206 San Jacinto st.; B. Y. Lovejoy, Sec., 109-111 E. 7th st.

No. 81, Ft. Worth, Tex.—G. E. Moffett, Pres., 213 N. Taylor st.; R. G. Wright, R. S., 103 W. 1st st.; Martin Doscher, F. S., 103 W. 1st st.

PRESENT AND PROSPECTIVE WORK.

Aurora, Ill.—Work has commenced on the new electric line which is to connect Aurora with Batavia. The line must be in running order by November. Eventually it will connect with the Elgin-Geneva (Ill.) electric line.

Benton Harbor, Mich.—The survey for the electric road to connect Benton Harbor, Paw Paw and Allegan has been completed, and it is expected that the work of construction will be commenced this fall.

Brooklyn, N. Y.—Kings County Elevated Railroad Co. has gone into the hands of a receiver, owing to the inroads made by the trolley cars on the patronage formerly enjoyed by the "L," which operates about twenty-two miles of road.

Cincinnati, O.—The street car lines of this city have all been consolidated. The consolidated company will be required to make improvements which will cost \$2,500,000 during the next eighteen months.

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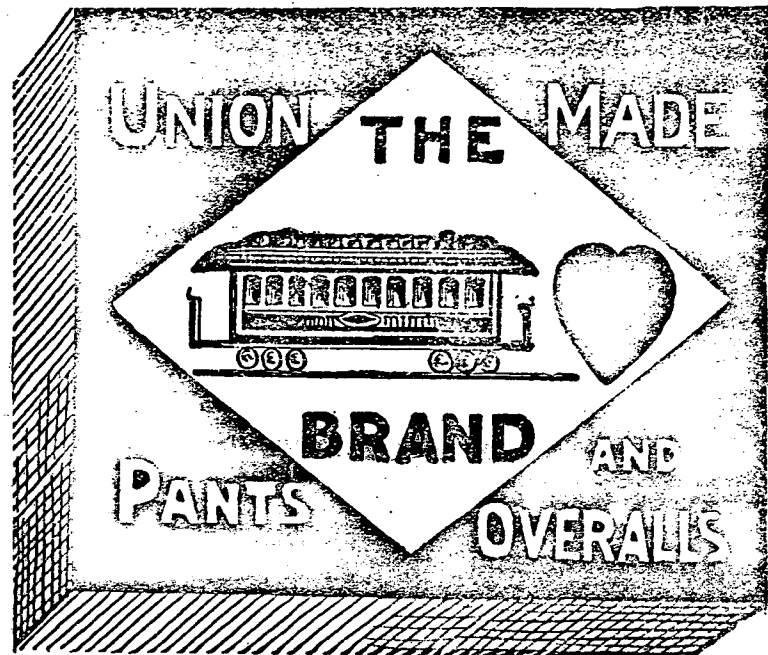
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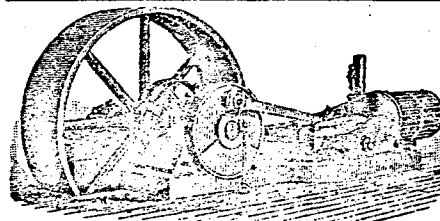
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